



REPORT

BIOCIDES COUNTRY PROFILE 2017

The following 79 Countries are profiled for their Biocide Consumption:

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- 3 Australia
- 4 Austria
- 5 Azerbaijan
- 6 Belarus
- 7 Belgium
- 8 Bolivia
- 9 Bosnia
- 10 Brazil
- 11 Bulgaria
- 12 Cameroon
- 13 Canada
- 14 Chile
- 15 China
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- 17 Costa Rica
- 18 Croatia
- 19 Czech Republic
- 20 Denmark
- 21 Dominican
- 22 Ecuador
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- 24 Estonia
- 25 Finland
- 26 France
- 27 Georgia
- 28 Germany
- 29 Greece
- 30 Guatamela
- 31 Hong Kong
- 32 Hungary
- 33 India
- 34 Indonesia
- 35 Iran
- 36 Ireland
- 37 Israel
- 38 Italy
- 39 Japan
- 40 Kazakhstan
- 41 Kenya
- 42 Latvia
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- 44 Macedonia
- 45 Malaysia
- 46 Mexico
- 47 Morocco
- 48 Netherlands
- 49 New Zealand

50 Nigeria
51 Norway
52 Pakistan
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54 Philippines
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56 Portugal
57 Romania
58 Russia
59 Saudi Arabia
60 Serbia
61 Singapore
62 Slovakia
63 Slovenia
64 South Africa
65 South Korea
66 Spain
67 Sweden
68 Switzerland
69 Taiwan
70 Thailand
71 Turkey
72 UAE
73 Ukraine
74 United Kingdom
75 United States
76 Uruguay
77 Uzbekistan
78 Venezuela
79 Vietnam

1. SCOPE OF THE REPORT

1.1. GLOBAL COUNTRY BIOCIDES REPORT

The market for Biocides by Country across the Globe is profiled. It illustrates how China's demand for Biocides has grown at a fast pace in the past decade whereas the UK market for Biocides has declined.

The report is based on in-depth reviews of market information along with discussions with Biocide manufacturers and end-users.

Each Country is profiled for Biocides under the following headings: Biocide Consumption, Biocide Distribution Analysis, Organisation for Regulating Biocides, Organisations Supporting Biocide Consumption, Main Biocide Producers, Main Biocide Distributors, Examples of Biocide End-Users (divided into Disinfection, Preservation and Water Treatment).

1.2. APPLICATIONS PROFILED

The following applications are profiled in the report:

- Disinfection (including Antiseptics, Disinfectants, Sterilants)
- Preservation (including all products which require Biocides for material protection)
- Water Treatment (including water used for Cooling, Gas production, Industry, Oil production, Paper production and Recreation)

1.3. GEOGRAPHICAL FOCUS

The report covers 79 Countries and more will be added as they are completed.

1.4. DEFINITIONS

Prices: All prices and sales forecasts are in \$ at active manufacture level, not at formulator or retail or distributor level. Prices are based on average market values and reflect sales of 1 Tonne quantities.

2. METHODOLOGY

The report draws from a variety of information sources including:

- Personal interviews with Biocide manufacturers, distributors, manufacturers of products using Biocides, trade associations and government agencies. The most important source of data are the interviews with manufacturers of products using Biocides.
- Review of all literature (product, technical, patent and other published material on Biocides), and an analysis of annual and financial reports.

- Compilation of the experiences, judgments and insights of BI personnel who have significant work experience in the Biocides industry throughout the globe.

2.1. STAFFING

BIS understands that the quality of work derives directly from the calibre of the people involved. All our consultants have local geographical knowledge as well as a scientific and business qualification. The following consultants would constitute a significant part of our project team.

Niall D’Arcy has a B.Agr.Sc from University College Dublin and an MBA from Manchester Business School and brings over twenty years of experience in the Biocides industry to BI. He has directed, managed and co-authored many multiclient studies and has assisted many companies internationally in their business research and planning projects. Niall is responsible for organising and collecting market information on Biocides used in many applications.

Jim Murray is an Information consultant with BI. Jim has conducted numerous interviews with industry experts by personal visit and has cultivated relationships with the leading associations across the globe. He recently coordinated a multiclient study on biocides throughout the world. In addition, Jim is responsible for coordinating Biocides Reporting Service.

Steve Jacob is an American national with responsibility for coordinating Biocides Reporting Service and updating our database which profiles over 5,000 end-users of biocides. His most recent responsibility was coordinating the global Biocides report where 19 end applications for Biocides are profiled.

Michael Glynn works as a marketing analyst with BI. Michael is responsible for organising and collecting market information on Biocides used in many applications with particular focus on Disinfectants.

Individual Country focus is provided via students from that Country who are studying at the Institute. For example, Mr Lei Shi is at Waterford Institute of Technology and is a Chinese national. He works with BI as an analyst with special responsibility for organising and collecting market information on Biocides used in many applications within China.

Biocide sales in the country profile are expressed as total formulated Biocide sales.

ALGERIA 2017

POPULATION: 40 Million

AVERAGE INCOME: \$ 7,500

BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (25%), Preservation (38%) and Water Treatment at (37%)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Stepan, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Kemkol, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	
Ecolab	Akzo Paints	Kemira
Sealed Air Diversey	ENAP	Ecolab Nalco
Reckit Benckiser	Henkel Household Products	
	P&G	
	PPG	
	Unilever Personal Care	

ARGENTINA 2017

POPULATION: 44 Million

AVERAGE INCOME: \$ 14,000

BIOCIDE CONSUMPTION: \$ 63 M. Biocide consumption can be segmented into Disinfection (23%), Preservation (47%) and Water Treatment at (30%)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by A.N.M.A.T. This is the Argentinean equivalent of the EPA.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Chemtura, Clariant, Dow, Ipel Itibanyl Produtos Especiais, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Sintesis Quimica (Punjab Chemicals), Stepan, Thor, Troy, West Agro.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Kemkol, Quetzal Quimica (Schulke), SAFC, Univar.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Clorox	Avon Personal Care	Clorotec Pool Disinfectants
Diproh	Akzo (Alba) Paints	Kemira
Sealed Air Diversey	BASF (Glasurit) Paints	Ecolab Nalco
Reckit Benckiser	Dial Household Products	Newbury
Spartan de Argentina (Ecolab) is leader	Sherwin Williams Paint	
	SintePlast Paint	
	Unilever Personal Care	

AUSTRALIA 2017

POPULATION: 24 Million

AVERAGE INCOME: \$ 39,000

BIOCIDE CONSUMPTION: \$ 66.15 M. Biocide consumption can be segmented into Disinfection (17%), Preservation (51%) and Water Treatment at (32%)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 45 % via distributors and 45 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Australian Government Pesticides and Veterinary Medicines Authority (APVMA see <http://www.apvma.gov.au/index.asp>). The contact within APVMA is Mr Paul Jung. It should be noted that the regulatory body does not consider efficacy of Biocides, only issues related to health, safety and the environment associated with the use of the Biocide. Biocides must also be listed by AICS (Australian Inventory of Chemical Substances).

ORGANISATIONS SUPPORTING BIOCIDES:

Once a Biocide is registered with the regulatory body, it can also be approved by trade bodies & Universities. For example a new fungicide for wood would need to be approved by the Australian Wood Preservative Association (AWPA). The data required to gain approval are provided via AWPA protocols which can be downloaded on <http://www.tpa.com.au/>. Once it is approved by the trade body, it will be considered for inclusion in the Australian Standard. The inclusion in the “approved list” of the relevant standards is determined by an expert committee nominated by the Government and Wood industry. This expert committee reviews efficacy data for the biocide and other relevant information (corrosiveness etc). This procedure applies to nearly all Biocides. Trade Associations include:

Accord, which represents disinfectant manufacturers and suppliers in Australia

Australian Paint Manufacturers Federation (www.apmf.asn.au)

AWPA (Australian Wood Preservatives Association)

International Standards (www.astm.org)

Surface Coatings Association (www.scao.asn.au)

MAIN BIOCIDES PRODUCERS: BASF, Bell Laboratories, Borax, Buckman, Chemeq, Chemtura, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Apollo, Bio Composites Plus, Chem Hawk, Chemiplas (Schulke), Cleveland Chemical, Kemcor, Nuplex, Valchem, Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Agar Cleaning	Barloworld	Algaefree
Calman (Zep International)	Benjamin Moore	GE Betz
Dominant	Orica	Ecolab Nalco
Ecolab	Protectex Chemicals	Zychem
Henkel	Wattyl	Grace
Jasol	Akzo Paints	
Sealed Air Diversey		
Whiteley Industries		

AUSTRIA 2017

POPULATION: 8 Million

AVERAGE INCOME: \$ 39,000

BIOCIDE CONSUMPTION: \$ 37.8 M. Biocide consumption can be segmented into Disinfection (33%), Preservation (44%) and Water Treatment at (23%)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are registered with the Federal Ministry of Agriculture, Forestry, Environment and Water Management. They are responsible for registration and authorisation of the Biocides under the Austrian Biocidal Products Law. The Austrian Biocidal law implements the European law on Biocides. More information on <http://ecb.jrc.it/biocides>

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via Federal Ministry of Agriculture, Forestry, Environment and Water Management, Div. VI/7 (Bundesministerium für Land - und Forstwirtschaft, Umwelt und Wasserwirtschaft, Abt. VI/7) Stubenbastei 5, A, 1010 Vienna
Telephone: +43 1 31 00 472

Email BPR: [biozide \(at\) umweltbundesamt.at](mailto:biozide(at)umweltbundesamt.at)

laboratory testing which demonstrates efficacy and other relevant information.

Many of the Austrian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Univar, Azelis, Gruner Chemie, IMCD, Nordmann Rassmann Distributors.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun, Chemoplan	Akzo Nobel	Ashland
Sealed Air Diversey, Ecolab	Amphibolin	Ecolab Nalco
Fabachem, Fresenius	Beiersdorf	
Merck	Henkel	

AZERBAIJAN 2017		
POPULATION: 10 Million		
AVERAGE INCOME: \$ 10,500		
BIOCIDE CONSUMPTION: \$ 18 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (40 %) and Water Treatment at (35 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	
Bode	Akzo Paints	Kemira
Sealed Air Diversey	Caparol	Ecolab Nalco
Reckit Benckiser	Dikes Paint	
	Temaspeed Paint	
	Unilever Personal Care	

BELARUS 2017		
POPULATION: 9 Million		
AVERAGE INCOME: \$ 16,000		
BIOCIDE CONSUMPTION: \$ 26.25 M. Biocide consumption can be segmented into Disinfection (24 %), Preservation (36 %) and Water Treatment at (40 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation,		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Lakokraska	Ecolab Nalco
Reckit Benckiser	Minsky Paint	
	P&G	
	Unilever Personal Care	

BELGIUM 2017

POPULATION: 11 Million

AVERAGE INCOME: \$ 37,000

BIOCIDE CONSUMPTION: \$ 40.95 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (51 %) and Water Treatment at (16 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: As a member of the European Union, Belgium will Federal Public Service (FPS) Health, Food Chain Safety and Environment, Eurostation II Place Victor Horta, 40 box 10, 1060 Brussels

Telephone: +32 (0) 2 524 97 97

Email BPR: info.biocides (at) environment.belgium.be

Email CLP: info (at) health.fgov.be

implement the European Biocides Products Directive when the transition period for the Directive comes to an end on 14th May 2014. Until then, all member states of the European Union are allowed to continue to apply their current systems for placing biocides on the market.

Biocides must be registered for use by the Federal Public Service Health, Food chain safety and Environment, General Directorate: Environment Eurostation, Victor Hortaplace, 40, box B 10B 1060, Brussels. More information on www.health.fgov.be. For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Many of the Belgium trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Buckman, Clariant, Dow, Janssen, Lanxess, Lonza, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Filter Service, Hospithera (Schulke), ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Anios, Cid Lines	Blockx	Albemarle
Ecolab	Los Blancos	Aquatreat
Saraya	PaulyPaint	Buckman
Sealed Air Diversey	Starlac	Ge
Schulke	Trimteal	Ecolab Nalco

BOLIVIA 2017

POPULATION: 11 Million

AVERAGE INCOME: \$ 6,000		
BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (30 %), Preservation (40 %) and Water Treatment at (30 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Dow, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDES ENDUSERS		
Disinfection	Preservation	Water Treatment
	Apalipa Personal Care	
	Akzo Paints	Kemira
Sealed Air Diversey	Cemex	Ecolab Nalco
Reckit Benckiser	Dial Household Products	
	Roxana Personal Care	
	Teknoquhmica Paint	
	Unilever Personal Care	

BOSNIA 2017

POPULATION: 3 Million

AVERAGE INCOME: \$ 8,000

BIOCIDE CONSUMPTION: \$ 8.4 M. Biocide consumption can be segmented into Disinfection (38 %), Preservation (25 %) and Water Treatment at (37 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Rutolit (Rinol) Flooring	Ecolab Nalco
Reckit Benckiser	P&G Household Products	
	PPG Paint	
	Tikkuria	
	Unilever Personal Care	

BRAZIL 2017

POPULATION: 201 Million

AVERAGE INCOME: \$ 10,000

BIOCIDE CONSUMPTION: \$ 160 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (48 %) and Water Treatment at (27 %). Halogenated biocides (DBDCB, DBNPA, BNPD, IPBC, Chlorhexidine, Chloroisocyanurates, chlorothalonil, halogenated hydantoin, iodophers, sodium bromide) are the leading category on a volume basis with 60 % and 20 % on a value basis. Organosulfurs (BIT, CIT/MIT, DCOIT, Dithiocarbamates, MBT, NPT, TCMTB, Thiones, ZPT) have 20 % on a volume basis and 30 % on a value basis. Nitrogen (Azoles, quats) have 8% on a volume basis and 20 % on a value basis. Inorganics have 5 % on a volume basis and 25 % on a value basis.

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Ministerio de Agricultura and ANVISA (National Agency for Sanitary Vigilance).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include:

Brazilian Cleaning Products Industry Association

Brazilian Association of Paint Manufacturers (www.abrafati.com)

Brazilian Association of Cosmetics (ABIHPEC)

MAIN BIOCIDES PRODUCERS: BASF, Buckman, BWA Water Services, Chemtura, Clariant, Dow, Ipel Itibanyl Produtos Especiais, Janssen, Lanxess, Lonza, Miracema Nuodex, Oxychem, Peroxychem, Sharon Laboratories, Solvay, Stepan, Thor, Troy, West Agro.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Dinaco Especialidades Quimicas (Schulke), ICC Chemical Corporation, Kalay Quimica do Brasil, Midland Quimica, SAFC, Univar.

BIOCIDE ENDUSERS: The leading Biocide consumers in each of the main applications are as follows.

Disinfection	Preservation	Water Treatment
Bombril (Chlorox)	Akzo Paint	Adesol (Degremont)
Colgate Palmolive	Reckitt Benckiser Household	Gamas Quimica, Kenisure (both Ecolab Nalco)
Ecolab	Beiersdorf	Kemira
Embraer	Suvinil (BASF) Paint	Nordesclor
Gessy (Lever)	SIKA Construction Products	Pernambuco
Gojo		
Microbiotecnica (Ecolab)		
Orniex		
Transglobo		

FUTURE GROWTH: GDP is expected to grow by 5 %. This will result in end-use markets growing such as construction which are linked to biocide usage. Biocide Information expects biocides to grow 4 % per year.

BULGARIA 2017

POPULATION: 7 Million

AVERAGE INCOME: \$ 150,000

BIOCIDE CONSUMPTION: \$ 18.9 M. Biocide consumption can be segmented into Disinfection (44 %), Preservation (33 %) and Water Treatment at (23 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are registered with the Health Ministry. More information on www.mh.government.bg

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via The Ministry of Health, 5, "Sveta Nedelya" sq , Sofia-1000

Telephone: +359 2 9301 214

Fax: +359 2 9883413

Email: amaslarska (at) mh.government.bg; ssimenonova (at) mh.government.bg
laboratory testing which demonstrates efficacy and other relevant information. The Biocides may also be monitored by the National Center of Public Health Protection. More information in <http://en.ncphp.government.bg>

Many of the Bulgarian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, Elton Corporation, (Schulke), IMCD, NAA Pharma, Nordmann Rassmann, Romy Dent, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, BBraun	Akzo Nobel	Ashland
Sealed Air Diversey	Henkel	Ecolab Nalco
Ecolab	Mapei	
	MegaChem	
	Strom Paint	

CAMEROON 2017		
POPULATION: 23 Million		
AVERAGE INCOME: \$ 3,000		
BIOCIDE CONSUMPTION: \$ 9.45 M. Biocide consumption can be segmented into Disinfection (22 %), Preservation (44 %) and Water Treatment at (34 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Naturex, Oxychem, Peroxychem, Rita, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Kemkol, Quetzal Quimica (Schulke), SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	J&J	Ecolab Nalco
Reckit Benckiser	Kao Household Products	
	Sherwin Williams Paint	
	Unilever Personal Care	

CANADA 2017

POPULATION: 36 Million

AVERAGE INCOME: \$ 37,000

BIOCIDE CONSUMPTION: \$ 157.5 M. Biocide consumption can be segmented into Disinfection (27 %) Preservation (39 %) and Water Treatment at (34 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 40 % via distributors and 50 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered by PMRA (Pesticide Management Regulatory Agency) within the Canadian Pesticide Management Regulatory Body <http://www.hs-sc.gc.ca/>

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include:

Canadian Chemical Producers Association (www.ccpa.ca)

Canadian Consumer Specialty Products Association (CCSPA)

The Canadian Food Inspection Agency (CFIA) approves the use of Biocides against diseases.

Canadian Paint Association (www.cdnpaint.org)

The Canadian Pest Control Products Act will endorse the use of Products.

Forintek supports the use of Biocides in Wood

For Wood Preservation, Canadian Wood Preservation Association

BIOCIDE PRODUCERS: Ashland, BASF, Borax, Buckman, BWA Water Services, Chemtura, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Pilot, Solvay, Stepan, Thor, Troy, West Agro.

BIOCIDE DISTRIBUTORS: Apco Industries, Brenntag, Chemroy, Debro Chemicals, Dempsey Corporation (Schulke), ICC Chemical Corporation, L.V. Lomas, Stochen, Univar.

BIOCIDE ENDUSERS

DISINFECTION	PRESERVATION	WATER TREATMENT
Armstrong Manufacturing	Celanese Latex	AquaServe
Avmor	Covalon	Baker Petrolite
Choisy	Cloverdale Paint	IntegraEnvironmental
Ecolab	Kryton	Melrose Chemicals
Hygienex Laboratory	Sico	Ecolab Nalco
Lalema		Trojan Chemicals
Mchem Industries		Watertiger
Prism Chemicals		
Qwatro		

CHILE 2017		
POPULATION: 17 Million		
AVERAGE INCOME: \$ 19,000		
BIOCIDE CONSUMPTION: \$ 31.5 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (43 %) and Water Treatment at (23 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Lanxess, Lonza, Oxychem, Peroxychem, SQM, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
	Avon Personal Care	
	Akzo Paints	Kemira
Sealed Air Diversey	Ceresita	Ecolab Nalco
Reckit Benckiser	Masisa	
	L'Oreal	
	Unilever Personal Care	

CHINA 2017		
POPULATION: 1,300 Million		
AVERAGE INCOME: \$ 8,000		
BIOCIDE CONSUMPTION: \$ 630 M. This is broken into Disinfection at 23 %, Preservation at 59 %, Water Treatment at 18 %		
BIOCIDE DISTRIBUTION: Distributors dominate as the market is fragmented.		
<p>REGULATORY BODY: Biocides must be approved by IECSA (Inventory for existing chemicals in China). For disinfectants and other high skin contact applications, Biocides are registered by the Ministry of Health of China.</p> <p>In China, Foreign manufacturers are required to register cosmetics before products are allowed onto the market. All ingredients must be on the inventory which is managed by the China SFDA (Safe Food and Drug Administration). On 1st July 2012, China SFDA published the second batch of the Inventory of Existing Cosmetic Ingredient in China (IECIC) for public consultations. There are 673 ingredients in the second batch of IECIC (2012). The first batch of IECSC (2012) was revised on 1 May 2012 and includes 1674 cosmetic ingredients.</p>		
<p>ORGANISATIONS SUPPORTING BIOCIDES:</p> <p>Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: China Mildewproof & Antiseptic Association China National Coatings Industrial Association (www.chinacoatingnet.com). International Standards (www.astm.org), Shanghai Institute of Microbiology, Shanghai Institute of Chemistry (SIOC), Zhejiang Chemical Industry Research</p>		
<p>MAIN BIOCIDES PRODUCERS: Ashland, Beijing Tianquing Chemicals, Buckman, Connect Chemicals (make quats), Dalian Biochem, Dow, Dynasty Chemicals, Evonik, Guangxi Nanning Chemical, Hebei Jinan Chemical, Jangsu Jiangdong Chemical, Jiheng Chemicals, Kao, Lanxess, Lonza, Nanhang Industry Co, Nanning Chemicals, Rudolf, Shandong Guangwei, Solvay, Troy, Thor, Wuhan Xinjing Chemical, Xuzhou KWS.</p>		
<p>MAIN BIOCIDES DISTRIBUTORS: Brenntag, China Chem, Dunwa Chemicals (Sanitized), Guangzhou BioHope (Schulke), H. Opol Trading (Sanitized), ICC Chemical Corporation, Openchem, Owen Trading Company, SAFC, Shanghai Saifu (Schulke), Shanghai Shicheng Chemicals (Schulke), Sinochem Guangzhou, Univar.</p>		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Akzo Paints, AmorePacific Cosmetics, Amway Cosmetics	Kemira
Ecolab	Bauhinia Paints, China Paints	Ecolab Nalco
Kao Disinfectants & Detergents	Chugoku Paint, Colgate Cleaners	Shanghai Duoqia
Likang	Henkel Adhesives, Houghton MWF,	Wujin Fine Chemical
	Kao Personal Care, Kansai Paint,	Shandong Taihe Water
	National Paints, Nippon Paints	
	P & G Shampoo	
	Shanghai Paints, Shiseido Cosmetics	
	Sika Construction Products, Tarkett Flooring	
	Valspar Paints, Wacker Latex	
<p>COMMENTARY: China is a developing Country e.g.consumption of Paints at 3 kg of Paints per person versus 20 kg of Paints per person in the west.</p>		

COLOMBIA 2017		
POPULATION: 49 Million		
AVERAGE INCOME: \$ 11,000		
BIOCIDE CONSUMPTION: \$ 29.4 M. Biocide consumption can be segmented into Disinfection (39 %), Preservation (36 %) and Water Treatment at (25 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered by Ministerio de la Proteccion Social..		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Beiersdorf	Artecola	
J&J	Grupo Sanchez	Kemira
Sealed Air Diversey	HB Fuller	Ecolab Nalco
Reckit Benckiser	Pintuco Grupo Orbis)	
	Sherwin Williams Paint	
	Unilever Personal Care	

COSTA RICA 2017		
POPULATION: 5 Million		
AVERAGE INCOME: \$ 13,000		
BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (40 %), Preservation (20 %) and Water Treatment at (40 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
	Avon Personal Care	
Sterigenics	Akzo Paints	Kemira
Sealed Air Diversey	PPG	Ecolab Nalco
Reckit Benckiser	Pintuco	
	Sherwin Williams Paint	
	Unilever Personal Care	

CROATIA 2017		
POPULATION: 4 Million		
AVERAGE INCOME: \$ 18,000		
BIOCIDE CONSUMPTION: \$ 18.9 M. Biocide consumption can be segmented into Disinfection (28 %), Preservation (44 %) and Water Treatment at (28 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered for use by Ministry of Health, Ksaver 200a - 10000 Zagreb. Telephone: +385 1 4607 555. Email BPR: biocidi (at) miz.hr.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Hellos	Ecolab Nalco
Reckit Benckiser	RPM	
	Sherwin Williams Paint	
	Tikkurila	

CZECH REPUBLIC 2017

POPULATION: 10 Million

AVERAGE INCOME: \$ 24,000

BIOCIDE CONSUMPTION: \$ 16.8 M. Biocide consumption can be segmented into Disinfection (35 %), Preservation (50 %) and Water Treatment at (15 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 35 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Ministry of Health of the Czech Republic

Palackeho namesti 4 CZ - 128 01 Prague 2

Telephone: +420 267 082 305

Fax: +420 267 082 228

Email: biocidy (at) mzcr.cz.

For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

The Ministry of Environment is responsible for all environmental issues. More information on www.env.cz

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Many of the Czech trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Bochemie, Clariant, Dow, Janssen, Lanxess, Lonza, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: ACE Trade, Biesterfeld Silcom, Brenntag, Cora, ICC Chemical Corporation, Nora, Radka, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, Argochem	Barvy	Separa Spol
Cormen	Balak	Spolchemie
Ecolab	Colorlak	WPE
Farmac	Henkel	
Farmakon		
Spolana		
Tatrachema		
Zenet		

DENMARK 2017

POPULATION: 6 Million

AVERAGE INCOME: \$ 37,000

BIOCIDE CONSUMPTION: \$ 23.1 M. Biocide consumption can be segmented into Disinfection (39 %), Preservation (26 %) and Water Treatment (35 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Department of Strategy and Management of Public Health
Danish Environmental Protection Agency
Department of Agriculture
Strandgade 29, DK-1401 Copenhagen K
Telephone: +45 72 54 40 00
General email: biocideshelpdesk (at) mst.dk

For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include:

Danish Technological Institute (www.teknologisk.dk)

The Product Register for Poison Control on www.arbejdstilsynet.dk

Many of the Danish trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Buckman, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Solvay, Rutgers, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Bionord, Bjorn Thorsen (Schulke), Brenntag, CosTech (Schulke), Ecowest, ICC Chemical Corporation, Kraft Chemicals, R2 Group, SAFC, Univar.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Alfa Laval	Beck & Jorgensen	Flemming Zwicky
Sealed Air Diversey	Dyrup	Hydrox
Ecolab	Flugger	Ecolab Nalco
Iduna	Hempel	
Novadon	Larco	

DOMINICAN REPUBLIC 2017

POPULATION: 11 Million

AVERAGE INCOME: \$ 10,000

BIOCIDE CONSUMPTION: \$ 9.45 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (33 %) and Water Treatment at (34 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Colgate Palmolive	Ecolab Nalco
Reckit Benckiser	P&G	
	Sherwin Williams Paint	
	Tnemec	

ECUADOR 2017		
POPULATION: 16 Million		
AVERAGE INCOME: \$ 10,000		
BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (40 %), Preservation (30 %) and Water Treatment at (30 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical CorporationSAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
	Avon Personal Care	
	Akzo Paints	Kemira
Sealed Air Diversey	L'Oreal	Ecolab Nalco
Reckit Benckiser	Pintuco	
Ecolab	Sherwin Williams Paint	
	Unilever Personal Care	

EGYPT 2017

POPULATION: 94 Million

AVERAGE INCOME: \$ 7,000

BIOCIDE CONSUMPTION: \$ 25.2 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (50 %) and Water Treatment at (25 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are registered by Ministry of Health.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Henkel Soaps	Asian Paints	
P&G	Bostik, Ferro	Kemira
Perfect Disinfection	Dyrup (PPG) Euroquarzo	Ecolab Nalco
Reckit Benckiser	Mapei, Kapci Coatings,	
	Sarantis	

ESTONIA 2017		
POPULATION: 1 Million		
AVERAGE INCOME: \$ 22,000		
BIOCIDE CONSUMPTION: \$ 7 M. Biocide consumption can be segmented into Disinfection (38 %), Preservation (37 %) and Water Treatment at (25 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered by Terviseamet /Health Board; Department of Chemicals Safety. Gonsiori 29, 10147 Tallinn Email BPR: bpr (at) sm.ee.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, DowDupont, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Bang & Bonsomer, Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	Ecolab
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Eastman	Solenis
Reckit Benckiser	Henkel Household Products	
	Tikkurila	
	Unilever Personal Care	

FINLAND 2017

POPULATION: 5 Million

AVERAGE INCOME: \$ 36,000

BIOCIDE CONSUMPTION: \$ 26.25 M. Biocide consumption can be segmented into Disinfection (31 %), Preservation (47 %) and Water Treatment (22 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Finnish Safety and Chemicals Agency (Tukes)

P.O.Box 66, 00521 Helsinki

Telephone: +358 400 393 033 (REACH/CLP); +358 50 597 6338 (BPR. For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include:

VTT Technical Research Centre which provide research, development and testing for Biocides and other Scientific applications (see www.vtt.fi).

Many of the Finish trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Buckman, BWA Water Services, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Bang & Bonsomer (Schulke), Brenntag, Flinkenberg, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, Ecolab	Teknos Winter	Bim Kemi (Cellchem)
Superfos Biosector	Tikkurila	Ashland
Orion	Akzo	Kemira
Sunex		Oy Banmark
		Ecolab Nalco

FRANCE 2017

POPULATION: 65 Million

AVERAGE INCOME: \$ 32,000

BIOCIDE CONSUMPTION: \$ 158.55 M. Biocide consumption can be segmented into Disinfection (28 %), Preservation (57 %) and Water Treatment at (15 %)

BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 20 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the ANSES – Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail

253 avenue du général Leclerc, 94701 Maisons-Alfort Cedex

Email: helpdesk-biocides (at) anses.fr

For Risk Assessment, AFSSET now called ANSM is responsible (Agence nationale de securite du medicament et des produits de Sante – French National Security Agency of Medicines and Health Products).

For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Many Associations are used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Association Française de Normalisation (AFNOR) will provide standardization and is a member of International Organization for Standardization. The national standardization is Cofrac (comité français d'accréditation). Other organisations include: Centre Technique du Bois et de l'Ameublement (www.ctba.fr). CTBA is affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org).

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Buckman, BWA Water Services, Chemtura, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Stepan, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, S & M France, Safic Alcan, SAFC, Seppic, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Alkapharm	Akzo Nobel	CIR
Air Liquid	Diot	Joud
Arnaud	Felor	Ecolab Nalco
BRC	Marius Dufour	Zwicky
Hypred	L'Oreal	Kemira
Sealed Air Diversey	Saint Gobain	
Sogeval		

GEORGIA 2017		
POPULATION: 4 Million		
AVERAGE INCOME: \$ 8,000		
BIOCIDE CONSUMPTION: \$ 16.8 M. Biocide consumption can be segmented into Disinfection(25 %), Preservation (44 %) and Water Treatment at (31 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides re not registered		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Axalta	
Henkel	Hempel Paints	Kemira
Sealed Air Diversey	Oriflame	Ecolab Nalco
Reckit Benckiser	Kao Household Products	
	Sherwin Williams Paint	
	Unilever Personal Care	

GERMANY 2017		
POPULATION: 82 Million		
AVERAGE INCOME: \$ 37,000		
BIOCIDE CONSUMPTION: \$ 367.5 M. Biocide consumption can be segmented into Disinfection (30 %), Preservation (56 %) and Water Treatment at (14 %)		
BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 30 % via distributors and 45 % via formulators and service companies.		
<p>REGULATORY BODY: Biocides must be registered for use by the BAuA – Bundesanstalt für Arbeitsschutz und Arbeitsmedizin Federal Institute for Occupational Safety and Health Friedrich-Henkel-Weg 1 – 25 D-44149 Dortmund Telephone: + 49 (0) 231 9071 2971 Fax: +49 (0) 231 9071 2679 Email: reach-clp-biozid (at) baua.bund.de</p> <p>For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals) and BFR Bundesinstitut für Risikobewertung (Federal Institute for Risk Assessment)</p>		
ORGANISATIONS SUPPORTING BIOCIDES:		
Universities and Trade Associations.		
MAIN BIOCIDES PRODUCERS: Akzo Nobel, Ashland, BASF, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Schulke, Solvay, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, Connect Chemicals, DBH Osthandelsgesellschaft, Nordmann & Rassman, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Ad Arztbedarf	BASF	Dr Kolb
Afalon	Brillux	Arno Willers
AFP	Caparol	GE
Braun	Beiersdorf Cosmetics	Carambs
Bode		Enviro Chemie
Henkel		Ecolab Nalco, Kemira
Lysoform		Solenis
Schulke & Mayr		Woellner

GREECE 2017

POPULATION: 11 Million

AVERAGE INCOME: \$ 19,000

BIOCIDE CONSUMPTION: \$ 18.9 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (44 %) and Water Treatment at (23 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 70 % via distributors and 20 % via formulators and service companies.

REGULATORY BODY: The regulations governing the use of Biocides are via the Biocides Products Regulation (BPR) which is managed by ECHA. A Biocidal Products Committee, consisting of representatives from each of the EU Member States will give its opinion on Biocidal products, supported by technical and scientific support from ECHA. A Biocidal product cannot be supplied on the EU market after 1st September 2017 unless the Biocide is included in the Article 95 list of the approved Biocides

After the approval of a Biocide, companies wishing to place biocidal products on the market have to apply for product authorisation at national or Country level. If the company does not manufacture the Biocide, they can request letters of access to the Biocide data from their Biocide suppliers. Address is Directorate of Environment under the Ministry of Finance 16, An. Tsocha str. GR-11521 Athens
Telephone: +30 210 64 79 286; +30 210 64 79 287. Email: elhelpdesk (at) gcsl.gr or www.minagria.gr

ORGANISATIONS SUPPORTING BIOCIDES:

Universities are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Many of the Greek trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, Ashland, BASF, Bayrol, Buckman, Dow, Janssen, Kumar organic, Lanxess, Lonza, Solenis, Solvay, Thompson Research Associates, Textron, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Azelis, Biesterfeld, Brenntag, Elanco, Elton, Nordmann Rassmann, Pharmex, Univar, Whitesea & Baltic Company.
As the market is fragmented, the above companies use national distributors. For example Whitesea & Baltic Distributors represent Kumar Organic personal care biocides, Schutz chlorhexidine & Textron Preservatives. In Greece, they will use Dichem (www.dichem.gr) as their local distributor.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Ecolab Nalco	Berling, Chimbioxan,	Buckman
Eureka	DruckFarben Hellas	Ecolab Nalco, Filpro
Hartman	Ilios Cotachem	GE
Sealed Air Diversey	KraftPaints, PPG	Kemira
Schulke	Mercola Adhesives, Sarantis, Vitex	

GUATEMALA 2017		
POPULATION: 17 Million		
AVERAGE INCOME: \$ 8,000		
BIOCIDE CONSUMPTION: \$ 9.45 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (33 %) and Water Treatment at (34 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Beiersdorf	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Clorox	Ecolab Nalco
Reckit Benckiser	Dial Household Products	
	PPG, Sanchez	
	Unilever Personal Care	

HONG KONG 2017		
POPULATION: 7 Million		
AVERAGE INCOME: \$ 42,000		
BIOCIDE CONSUMPTION: \$ 14.7 M. Biocide consumption can be segmented into Disinfection (36 %), Preservation (50 %) and Water Treatment at (14 %)		
BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.		
REGULATORY BODY: Biocides are registered with the Health Ministry.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Schulke, Thor and Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, Univar, Azelis, IMCD.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Akzo Nobel	
Sealed Air Diversey	PPG	Ecolab Nalco
Ecolab	P & G	Kemira, Solenis
Johnson & Johnson	Kao	

HUNGARY 2017

POPULATION: 10 Million

AVERAGE INCOME: \$ 18,000

BIOCIDE CONSUMPTION: \$ 19.95 M. Biocide consumption can be segmented into Disinfection (47 %), Preservation (21 %) and Water Treatment (32 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are registered with the National Public Health and Medical Officer's Service. More information can be seen on www.antsz.hu

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via Office of the Chief Medical Officer

H-1097 Budapest, Gyáli út 2-6

Telephone: +36 1 476 1214

Email: [biocid.helpdesk \(at\) oth.antsz.hu](mailto:biocid.helpdesk@oth.antsz.hu)

laboratory testing which demonstrates efficacy and other relevant information.

Many of the Hungarian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Allegro (Schulke), Azelis, Brenntag, IMCD, Nordmann Rasmann, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, BBraun	Akzo Nobel	
Sealed Air Diversey	Amphibolin	Ecolab Nalco
Ecolab	BASF	
	Beiersdorf	
	Henkel	

INDIA 2017

POPULATION: 1.3 Billion

AVERAGE INCOME: \$ 5,000

BIOCIDE CONSUMPTION: \$ 199.5 M. Biocide consumption can be segmented into Disinfection (42 %), Preservation (26 %) and Water Treatment at (32 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 60 % via distributors and 30 % via formulators and service companies.

REGULATORY BODY: Biocides are regulated in India under an Insecticides law and one must have registration from Central Insecticides Board (CIB) which is within the department of Agriculture. Biocides in Personal Care and Disinfectants must be registered with the Central Drugs Standard Control Organization Directorate General of Health Services Ministry of Health and Family Welfare, Nirman Bhavan, New Delhi -110011.

E-Mail : <http://cdsco.nic.in/html/contactus.html>

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include:

Forest Research Institute

Indian Home & Personal Care Industry Association

Indian Institute of Science, Bangalore

India Plastics Association (www.aipma.net)

The Bureau of India Standards (BIS) will take care of all aspects of preservative uses in India.

MAIN BIOCIDES SUPPLIERS: Aquapharm, Buckman, Clariant, Dead Sea Bromine, Dishman, Dow, Excel Industries, Galaxy, Huntsman (Laffans), Lanxess, Kumar Organic Products, Melzer, Pax Chemical, Punjab Chemicals, Resil Chemicals, RN Pharmaceuticals, Salicylates & Chemicals, Salipol (owned by Salicylates & Chemipol), Schulke, Tagros, Thor, Troy, Vivimed, Wilmar.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Connell Bros (Schulke), Fine Organics, ICC Chemical Corporation, Interchem, K-Tech, Noor Chemicals, Raman & Weil, SAFC, S & A Impex, Univar, Yasham Bio-Science (Schulke).

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Dabur	Asian Paints (37 % of Paints)	AFCL, Auchtel, Chempure
Envirochem Systems	Kansai Nerolac (has 20 % of Paints Market)	Declibac, EcolabNalco, Ion Exchange,
Johnson & Johnson	Berger (18 % of Paints)	Paradise Environmental
Sanosil BioTech	AKZO (14 % of Paints)	Taurus Technology, Thermax
Reckitt Benckiser	Shalimar (5 % of Paints)	Vasu Chekicals
Unilever	Bostik Adhesives	

INDONESIA 2017

POPULATION: 260 Million

AVERAGE INCOME: \$ 5,000

BIOCIDE CONSUMPTION: \$ 31.5 M. Biocide consumption can be segmented into Disinfection (23 %), Preservation (47 %) and Water Treatment at (30 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Kao, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, Demka Sakti, IMCD, Incoplas (Sanitized), Menjangan Sakti (Schulke), United Chemicals Inter Aneka (Schulke), Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Akzo Nobel	
Ecolab	Reckitt Benckiser	Ecolab Nalco
	Unilever	Sinar Mas Paper, Solenis

IRAN 2017

POPULATION: 80 Million

AVERAGE INCOME: \$ 12,000

BIOCIDE CONSUMPTION: \$ 25 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (40 %) and Water Treatment (27 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Dagugar Raf	Avon Personal Care	
Ecolab	Akzo Paints	Kemira
Neznim	Henkel	Ecolab Nalco
Reckit Benckiser	Kao Household Products	
	Pakshoo	
	Pars Kondor	
	Unilever Personal Care	

IRELAND 2017

POPULATION: 5 Million

AVERAGE INCOME: \$ 34,000

BIOCIDE CONSUMPTION: \$ 15.75 M. Biocide consumption can be segmented into Disinfection (27 %), Preservation (53 %) and Water Treatment (20 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 60 % via distributors and 30 % via formulators and service companies.

REGULATORY BODY: Biocides are regulated by Pesticide Registration and Control Division

Dept of Agriculture, Food and the Marine, Back Weston Laboratory Complex, Backweston, Celbridge, Co Kildare

Telephone: +353 1 615 7552

Email: biocides (at) agriculture.gov.ie.

Webmail: www.pcs.agriculture.gov.ie

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include: Moorepark, Irish Medical Organisation, The Bureau of Standards

Many of the Irish trade bodies are affiliated to European bodies such as AISE

(European trade association for the Soaps and Detergents Industry. www.aise-net.org),

ASTM (International Standards), CEPE (European trade association for Paints),

COLIPA (European trade association for the Cosmetics and Toiletries industry.

www.colipa.com) EN (European Standards), EWPM (European trade association for

Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU.

www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Dow, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Ashland, Brenntag, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, Ecolab	Akzo Nobel	Ecolab Nalco
Sealed Air Diversey, Lotus (GP)	Crown Paint	Solenis

ISRAEL 2017

POPULATION: 8 Million

AVERAGE INCOME: \$ 36,000

BIOCIDE CONSUMPTION: \$ 45.15 M. Biocide consumption can be segmented into Disinfection (16 %), Preservation (65 %) and Water Treatment at (19 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, ICL, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Sharon, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Deb	Avon Personal Care	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Dystar	Ecolab Nalco
Reckit Benckiser	Nilit Textiles	
	Tambour Paint	
	Tara Haircare	
	Unilever Personal Care	

ITALY 2017

POPULATION: 60 Million

AVERAGE INCOME: \$ 30,000

BIOCIDE CONSUMPTION: \$ 157.5 M. Biocide consumption can be segmented into Disinfection (26 %), Preservation (57 %) and Water Treatment at (17 %)

BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 30 % via distributors and 45 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Ministry of Health

Direzione generale dei dispositivi medici, del servizio farmaceutico e della sicurezza delle cure - ufficio VII

Viale Giorgio Ribotta, 5 00144 Roma

Telephone (for technical and scientific issues):

dott.ssa Emanuela Fabbri +39 06 59 94 37 33

dott.ssa Daniela Gigante +39 06 59 94 38 49

Email: Biocidi (at) sanita.it

Biocides may also be monitored by the Ministry of Environment to evaluate the effects of the Biocide on the Environment.

For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Italian National Association of Industrial Coaters (www.anver.org)

National Association of Paints & Adhesives

Many of the Italian trade bodies are affiliated to European bodies

MAIN BIOCIDES PRODUCERS: 3V Sigma, Akzo Nobel, BASF, Buckman, Chemtura, Clariant, Datt Chemica, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Schulke, Societa Chimica Lardello, Solvay, Stepan, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, De Marco (Schulke), DGS Products, ICC Chemical Corporation, Italsteril, SAFC, Univar.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
AEB	Ard Raccanecio	3 F Chemical
Deco	Boero	Caffaro
Ecolab	Caparreghini	Gaetasrl
Farmec	Colorificio Paulin	Idiochem
Mondial	Impa	Papirkemie
Predomini	Max Meyer	NCR Biochemical
	Milesi	Ecolab Nalco

JAPAN 2017

POPULATION: 130 Million

AVERAGE INCOME: \$ 33,000

INTRODUCTION: Japan has been experiencing negative growth in its economy over the last 10 years. A major contributor to this trend is that Japan has been outsourcing its manufacturing sector to other Asian economies. For example its coatings industry was 1.5 million litres in 2008 and 1,300 in 2017. This equates to 10 litres per person or twice the average for all of Asia Pacific. Japan ranks number 3 in Asia-Pacific in volume terms for Paints and number 2 in value terms. The negative trend in Coatings is expected to turn around and a small increase is predicted in 2017.

BIOCIDE CONSUMPTION: \$ 438.9 M. Biocide consumption can be segmented into Disinfection (22 %), Preservation (62 %) and Water Treatment at (16 %). Within the globe, Japan has about 15 % of the market for Paint Production and similar % for other products such as Adhesives. Therefore one could make the assumption that it consumes 15 % of the global Preservatives market.

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Ministry of International Trade and Industry (MITI) via ENCS (Existing and New Chemical Substances). Biocides must be included in the list of existing chemical substances. Technical references on these chemicals are also found in the Japan Industrial Standards (JIS) from MITI. In addition, the Ministry of Health and Welfare regulate Biocides for use in Cosmetics and Personal Care under the Pharmaceutical and Food Safety Bureau.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include:

Gin-tou Muki Koukinzai Kenkyukai (The silver society)

Japan Food Research Laboratories

Japan Industrial Standards (JIS)

Japan Institute of Wastewater Engineering and Technology (JIWET)

Japan Paint Manufacturers Association (www.jp.eng)

Japan Wood Preservers Association (JWPA)

Ship Building Research Association

MAIN BIOCIDES PRODUCERS: API, Chemicrea, Chemipro Kasei, Clariant, Dow, Ishizuka Glass, I-Tech, Kanebo, Katayama Chemicals, Lanxess, Lonza, Nihon Nohyaku, Sangi, Sankyo Lifetech, Schulke & Mayr, Sinanen, Sumitomo, Tama Kagaku Kogyo, Toagosei, Tosoh Corporation, Toyo Riken (JV of DIC & San-Ai Oil), Troy, Thor, Xyence.

MAIN BIOCIDES DISTRIBUTORS: D.I.C., Ducomm, Nichimen, Sanyo Chemical Industries, Seiwa Kasei (Schulke).

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Kenei Pharm Disinfection, Nippon	Asahipen Paint, DNT, Kao Household Products, Kansai Paint, Kasei Paint, Koshi Preserving Co.	Ecolab, Katayama

Kawamoto, Meiji Seika Kaisha, Kyorin, Shionogi	Nippon Paint, Toyo Wood Preservation, Sika Construction Products	Kurita Water Industries, Marubeni Vivendi Environment Corp
Towa Chemical, Zenyaku	Xyence Corporation	
NEW BIOCIDES INTRODUCTIONS: Sinanen introduced Zeomighty which contains silver and copper with total sales at 180,000T. Its target market is to provide antimicrobial concrete products.		

KAZAKHSTAN 2017

POPULATION: 18 Million

AVERAGE INCOME: \$ 14,000

BIOCIDE CONSUMPTION: \$ 14 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (41 %) and Water Treatment at (30 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Lanxess, Lonza, Oxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Schulke, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Clorox	Avon Personal Care	GE
Henkel	Akzo	Kemira
Sealed Air Diversey	Jotun	Ecolab Nalco
Reckit Benckiser	National Paints	Weatherford
Ecolab	Unilever	

KENYA 2017		
POPULATION: 47 Million		
AVERAGE INCOME: \$ 2,000		
BIOCIDE CONSUMPTION: \$ 12.6 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (42 %) and Water Treatment at (33 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are registered by Ministry of Health. Disinfectant for livestock and fisheries is regulated by Ministry of livestock and fisheries. Hospital disinfection is regulated by KEMRI: Kenya Medical Research Center.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Chemtura, Clariant, DowDupont, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Schulke, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBRaun	Akzo	
Beiersdorf	Godrej Consumer, HB Fuller	Kemira
Sealed Air Diversey	Kansai Paint	Ecolab Nalco
Reckit Benckiser	Kao Household Products	
Ecolab	MA Hanna	
	Unilever Personal Care	

LATVIA 2017		
POPULATION: 2 Million		
AVERAGE INCOME: \$ 19,000		
BIOCIDE CONSUMPTION: \$ 12 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (43 %) and Water Treatment at (28 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are registered by Latvian Environment, Geology and Meteorology Centre (LEGMC), Chemicals and Hazardous Waste Department Maskavas iela 165, Rīga, LV-1019. Telephone: +371 6703 2027; +371 6777 0020 Email BPR: biocides (at) lvgmc.lv.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Schulke, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Cemex	
Henkel	Henkel Household Products	Kemira
Sealed Air Diversey	Kronospan	Ecolab Nalco
Reckit Benckiser	Tikkurila	
Ecolab	Uralchem	

LITHUANIA 2017

Population: 3 Million

Average income: \$ 22,000

Biocide consumption: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (40 %), Preservation (30 %) and Water Treatment at (30 %)

Biocide distribution: 10 % goes direct to end-users followed by 35 % via distributors and 55 % via formulators and service companies.

Regulatory body: Application for authorisation and registration for a biocide can be made at Vilnius Public Health Centre

Kalvariju st. 153, LT-08221 Vilnius

Telephone: +370 5 212 4098

Fax: +370 5 261 2707

Email: info (at) vilniausvsc.sam.lt

Many of the Lithuanian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

Main biocides producers: Dow, Thor, Schulke & Mayr

Main biocide distributors: Apiterapija (Schulke), Bang & Bonsomer (Schulke), Brenntag, Univar

Biocide endusers: Biok, Higeja, Henkel, Koslita, KMDS, Ruvera

MALAYSIA 2017		
POPULATION: 31 Million		
AVERAGE INCOME: \$ 13,800		
BIOCIDE CONSUMPTION: \$ 37.8 M. Biocide consumption can be segmented into Disinfection (47 %), Preservation (28 %) and Water Treatment at (25 %)		
BIOCIDE DISTRIBUTION: 5 % goes direct to end-users followed by 50 % via distributors and 45 % via formulators and service companies.		
REGULATORY BODY: Biocides are divided into Germicides and Preservatives. Germicides are regulated by the Ministry of Health. Preservatives must be registered for use by the Pesticide Board under the Ministry of Agriculture. More information on http://www.pusaka.org.my/eng/profile.html		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include: Malaysian Paint Manufacturers Association Malaysia Medical Association (MMA)		
MAIN BIOCIDES PRODUCERS: BASF, CCM, DowDupont, Exodus, Lanxess, Lonza, Schulke, Texchem, Thor.		
MAIN BIOCIDES DISTRIBUTORS: Agro-Industrial, Brenntag, Connell Bros, GME Chemicals, ICC Chemical Corporation, IMCD (Schulke), Megachem, Selangor, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Akzo Paint, Berger Paint,	Chemical Company of Malaysia
Ecolab	Akema Bostik,	Envirolyte Technologies
Hovid Berhad	Kansai Paint, Nippon Paint	EcolabNalco, GE
Meditech	Jotun Paints, Watty Paints	Zircon Diversified Technologies
Prominent		

MACEDONIA 2017		
POPULATION: 2 Million		
AVERAGE INCOME: \$ 11,000		
BIOCIDE CONSUMPTION: \$ 7.35 M. Biocide consumption can be segmented into Disinfection (43 %), Preservation (29 %) and Water Treatment at (28 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Chemtura, Clariant, DowDupont, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Schulke, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Avon Personal Care	Kemira
Reckit Benckiser	Akzo Paints	Ecolab Nalco
Ecolab	Henkel Household Products	
	Sherwin Williams Paint	
	Tikkurila	
	Unilever Personal Care	

MEXICO 2017		
POPULATION: 129 Million		
AVERAGE INCOME: \$ 13,000		
BIOCIDE CONSUMPTION: \$ 136 M. Biocide consumption can be segmented into Disinfection (50 %), Preservation (17 %) and Water Treatment at (33 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered for use by the Health Ministry. Biocides are regulated according to two criterias 1) According to the products end use 2) According with the type of active ingredient used. It is a difficult process that in most parts follows the European guidelines. The regulatory body is the Cofepris (Comision Federal Para Riesgo Sanitario) that is a body of the Secretaria de Salud. (Health Ministry).		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: Asociacion Nacional de la Industria Quimica (www.aniq.org.mx) Mexican Personal and Home Care Association Mexican Paint Association (www.anafapymexico.org.mx)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman (manufacture dithiocarbamates), BWA Water Services, Clariant (manufacture quats), DowDupont, Janssen, Lanxess, Lonza, Organosintesis (manufacture quats), Oxychem, Pilot, Petrocarbone, Quimikao (manufacture quats), Schulke & Mayr, Solvay, Stepan, Thor (manufacture isothiazolinones), Troy, West Agro.		
MAIN BIOCIDES DISTRIBUTORS: Apollo, Brenntag, ICC Chemical Corporation, Rita, SAFC, Sintoquim (Schulke), Univar.		
FUTURE FOR BIOCIDES: As the Mexican economy grows, it will experience a favourable expansion in biocides which gain from increased consumption in key end-use market applications such as paints and coatings, latex emulsions, and cosmetics and toiletries. The largest market for Biocides is Disinfection which is being boosted by increased awareness for health, safety, and environmental concerns. Since the outbreak of the H1N1 virus in Mexico, stricter hygiene and disinfection practices have been adopted in the consumer, healthcare and institutional sector, stimulating sales for disinfectants, and sanitizers. The future for Biocides favours a shift towards the use of metal-free, formaldehyde-free, and low VOC biocide products. In the case of cooling water treatment, there is a general trend to replace chlorine for safer alternatives. The Mexican specialty biocides market will grow at a compound annual growth rate of 4%.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Bondex	Akzo Paint	Aqualine Systems
Dile Industrial	Colgate Cleaners	Baker Hughes
Sealed Air Diversey	Dystar	Ecolab Nalco
Ecolab	L'Oreal	Electromecanica Del Golfo
Homecare de Mexico	Procter & Gamble	GE
Key Quimica	Sherwin Williams Paint	Halliburton
Oculus	Unilever	Schlumberger
Petrocarbone	Wattyl Paint	

MOROCCO 2017

POPULATION: 35 Million

AVERAGE INCOME: \$ 6,000

BIOCIDE CONSUMPTION: \$ 9.45 M. Biocide consumption can be segmented into Disinfection (34 %), Preservation (44 %) and Water Treatment at (22 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Thor, Troy, West Agro.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Schulke, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Avon Personal Care	Akwa Oil & Gas
Reckit Benckiser	Akzo Paints	Ecolab Nalco
Ecolab	Jotun	
	Kao Household Products	
	P&G	
	PPG Paint	
	Unilever Personal Care	

NETHERLANDS 2017

POPULATION: 17 Million

AVERAGE INCOME: \$ 30,000

BIOCIDE CONSUMPTION: \$ 63 M. Biocide consumption can be segmented into Disinfection (43 %), Preservation (26 %) and Water Treatment at (31 %)

BIOCIDE DISTRIBUTION: 20 % goes direct to end-users followed by 35 % via distributors and 45 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by CtGB - College voor de toelating van gewasbeschermingsmiddelen en biociden

Stadsbrink 5, 6707 AA Wageningen

Telephone: +31 0 317 47 18 10

Email: helpdesk (at) ctgb.nl

For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Many of the Netherlands trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dead Sea Bromine, DowDupont, Emerald Kalama (benzoic acid), Flexchemie, Janssen, Lanxess, Lonza, Oxychem, Solvay, Tanatex Chemicals, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, BSN Medical, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Bentfield	Akzo Nobel	Solenis
Christeyns	Codi	Lenntech
Dam Bodegraven	Lever	Ecolab Nalco
Sealed Air Diversey		
Ecolab		
Rogier Bosman		
Thetford		
Zep Manufacturing		

NEW ZEALAND 2017

POPULATION: 4 Million

AVERAGE INCOME: \$ 30,000

BIOCIDE CONSUMPTION: \$ 15.75 M at formulator level. Biocide consumption can be segmented into Disinfection (20 %), Preservation (53 %) and Water Treatment (27 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users, 35 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Environmental Risk Management Authority (ERMA) (see <http://www.erna.gov.nz>). It should be noted that the regulatory body does not consider efficacy of Biocides, only issues related to health, safety and the environment associated with the use of the Biocide. Once a Biocide is registered with the regulatory body, it can then be further recommended by organisations governing its application. Cosmetics are regulated by the Cosmetic Products Group Standard. For example a new fungicide for wood would be registered and then be included in “approved list” of the relevant standards for Wood preservation. The inclusion in the “approved list” of the relevant standards is determined by an expert committee nominated by the Government and Wood industry. This expert committee reviews efficacy data for the biocide and other relevant information (corrosiveness etc).

ORGANISATIONS SUPPORTING BIOCIDES:

Once a Biocide is registered, it can then be further recommended by organisations governing its application. For example a new fungicide for wood should be included in “approved list” of the relevant standards for Wood preservation. The inclusion in the “approved list” of the relevant standards is determined by an expert committee nominated by the Government and Wood industry. This expert committee reviews efficacy data for the biocide and other relevant information (corrosiveness etc). The New Zealand Standards reviews efficacy data and other relevant information for any Biocide which wishes to be listed in the standards for that application. For example in Round and Sawn timber, the relevant standard is NZS 3640. Any Biocide which wishes to be approved for this standard, must have its efficacy data and other relevant information approved by an expert committee for this standard. The New Zealand Food Safety Authority supports the use of Biocides to control microbes and certain diseases. Examples of approving bodies are:
Surface Coatings Association of New Zealand (www.scanz.org.nz)

MAIN BIOCIDES PRODUCERS: BASF, Bell Laboratories, Borax, Buckman, Chemeq, ChemColour, Clariant, DowDupont, Janssen, Koppers, Lanxess, Lonza, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag , Chemiplas (Schulke), ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Aakland Chemicals	Orica Paint	GE Betz
Ecolab	Wattyl Paint	Kemira
Magnolia	Akzo Paint	Ecolab Nalco
Kimberley Clark Health Care		
Unilever		

NIGERIA 2017

POPULATION: 187 Million

AVERAGE INCOME: \$ 3,000

BIOCIDE CONSUMPTION: \$ 17.85 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (35 %) and Water Treatment at (35 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, Clariant, DowDupont, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Ecolab	Avon Personal Care	Kemira
Sealed Air Diversey	Akzo Paints, Berger Paints	Ecolab Nalco
Reckit Benckiser	Dabur Skincare	Solenis
	Hagemayer	
	Spencer Coatings	
	Unilever Personal Care	

NORWAY 2017

POPULATION: 5 Million

AVERAGE INCOME: \$ 56,000

BIOCIDE CONSUMPTION: \$ 39.9 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (42 %) and Water Treatment at (29 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by Norwegian Environment Agency
P.O. Box 5672 Sluppen 7485 Trondheim
Telephone: +47 73 58 05 00
Email BPR: biocides (at) miljodir.no
Email CLP and REACH: clpreach (at) miljodir.no
For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include: Norwegian Institute of Wood Technology, Norwegian Paint Makers Association

Many of the Norwegian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, Baker Petrolite, BASF, Buckman, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Mason, Lonza, Oxychem, Solvay, Thor, Troy, Viance.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Bröste, CosTech, Ecowest, ICC Chemical Corporation, Kraft Chemicals, SAFC, Univar.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Ecolab	Akzo Paints	Baker Petrolite
Sealed Air Diversey	Jotun Paints	GE
SCA		Kemira
		Ecolab Nalco
		Saipem, Solenis, Weatherford.

PAKISTAN 2017

POPULATION: 193 Million

AVERAGE INCOME: \$ 3,000

BIOCIDE CONSUMPTION: \$ 18.9 M. Biocide consumption can be segmented into Disinfection (33 %), Preservation (39 %) and Water Treatment at (28 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, Clariant, DowDupont, Galaxy, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Salicylates, Solvay, Thor, Troy, Vivimed.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Ecolab	Archroma, Buxly Paints	GE
Sealed Air Diversey	Akzo Paints	Kemira
Reckit Benckiser	DIC	Ecolab Nalco
	Dial Household Products	
	Jotun	
	Kansai	
	Unilever Personal Care	

PERU 2017

POPULATION: 31 Million

AVERAGE INCOME: \$ 11,000

BIOCIDE CONSUMPTION: \$ 18.9 M. Biocide consumption can be segmented into Disinfection (39 %), Preservation (33 %) and Water Treatment at (27 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, DowDupont, Ipel, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Belcorp	Artecola	

Reckit Benckiser	Akzo Paints	Kemira
Sealed Air Diversey	L'Oreal	Ecolab Nalco
Reckit Benckiser	Treknoquimica Paint	
	Sherwin Williams Paint	
	Unilever Personal Care	

PHILIPPINES 2017		
POPULATION: 103 Million		
AVERAGE INCOME: \$ 5,000		
BIOCIDE CONSUMPTION: \$ 22.05 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (43 %) and Water Treatment at (28 %).		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 80 % via distributors and 10 % via formulators and service companies.		
REGULATORY BODY: Biocides do not have to be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Beijing Sunpu, Buckman, Clariant, Dow, Galaxy, Lanxess, Lonza, Schulke, Sharon, Thor, Troy, Vivimed.		
MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, DKSH (Schulke), IMCD, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Akzo Nobel	Ecolab Nalco
Ecolab	Boyson Paint	Solenis
Surgikleen	Henkel, HB Fuller	
Tomi	L'Oreal, Nippon Paint	

POLAND 2017

POPULATION: 39 Million

AVERAGE INCOME: \$ 17,000

BIOCIDE CONSUMPTION: \$ 73.5 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (56 %) and Water Treatment at (15 %).

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 40 % via distributors and 50 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use The Office for Registration of Medicinal Products,
41 Żąbkowska Str., 03-736 Warsaw
Telephone: +48 22 492 09 00
Email: pb (at) urpl.gov.pl
BPR website

07. For the future, Biocides must be registered for use by the Biocides division of the European Chemicals agency (www.echa.eu). The Biocides must also be listed on EINECS (European Inventory of Existing and Commercial Substances) which is a list of chemical substances existing in EU member states and ELINCS (European list of notified chemicals).

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include: Institute of Wood Technology

Many of the Polish trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Clariant, DOWDupont, Galaxy, Janssen, Lanxess, Lonza, Salicylates, Schulke, Shandong Ailitong, Troy, Thor, Vivimed.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Cheman (member of Ciech group), Clarchem, Forchem (Schulke), Hamburgska Polka Handcowa, Higiena, Integral, Nordmann & Rassman, Poczta, Univar.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Acrymed	PPG	Kemira
Astrimed	Snieszka Paint	Ecolab Nalco
Sealed Air Diversey	Akzo	GE
Ecolab	Axalta Coatings	Solenis
Fregata	Tikkurila	
Higiena	Anser Personal Care	
Jedrzed Sniadeck	Colgate Household Products	
Johnson & Johnson	Lever Household Products	
Septomi		

PORTUGAL 2017

POPULATION: 10 Million

AVERAGE INCOME: \$ 23,000		
BIOCIDE CONSUMPTION: \$ 27.3 M. Biocide consumption can be segmented into Disinfection (38 %), Preservation (35 %) and Water Treatment at (27 %).		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
<p>REGULATORY BODY: Biocides must be registered via BPR products at Direção-Geral da Saúde (DGS) Alameda D. Afonso Henriques, 45 – 1049 005 Lisboa Telephone: +351 218 430 500.</p> <p>Competent authority for veterinary use products and wood preservative products. Direção-General de alimentação e veterinária (DGAV)</p> <p>Applications on biocidal products for veterinary use. Divisão de Gestão e Avaliação de Medicamentos Veterinários (DGAMV) Largo de Academia Nacional das Belas Artes, 2 1249-105 Lisboa Telephone: +351 213 239 500</p> <p>Applications on wood preservative products (Biocidal PT8). Divisão de Gestão e Avaliação de Produtos Fitofarmacêuticos (DGAPF) Quinta do Marquês 2780-155 Oeiras. www.dgav.pt Telephone +351 214 464 000.</p>		
<p>ORGANISATIONS SUPPORTING BIOCIDES:</p> <p>Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:</p> <p>International Standards (www.astm.org)</p>		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Thor, Troy, Vivimed.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDES ENDUSERS		
Disinfection	Preservation	Water Treatment
Ecolab	Akzo, Celanese, CIN, HB Fuller	Solenis
Sealed Air Diversey	Imerys PCC, Lafarge, Materis	Kemira
Reckit Benckiser	PPG	Ecolab Nalco
Unilever	Dial Household Products	
	Sherwin Williams	

ROMANIA 2017		
POPULATION: 19 Million		
AVERAGE INCOME: \$ 15,000		
BIOCIDE CONSUMPTION: \$ 21 M. Biocide consumption can be segmented into Disinfection (50 %), Preservation (20 %) and Water Treatment at (30 %)		
BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.		
<p>REGULATORY BODY: Biocides are registered with Ministry of Health, National Committee for Biocidal Products Str. Dr. A. leonte, Nr 1-3 050463 Bucuresti Telephone: +40 21 311 86 20 Fax +40 21 311 86 20 Email: biocide (at) @insp.gov.ro BPR website.</p>		
<p>ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Many of the Romanian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.</p>		
MAIN BIOCIDES SUPPLIERS: BASF, Buckman, Clariant, DowDupont, Lanxess, Lonza, Schulke, Thor and Troy.		
MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, Elton Corporation (Schulke), IMCD, S.C. Intercoop, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
BBraun	Akzo Nobel	Ecolab Nalco
Sealed Air Diversey	BASF	Kemira
Ecolab, Henkel	Beiersdorf, Fabryo Corp,	
Unilever	Tikkurila Paint	

RUSSIA 2017

POPULATION: 146 Million

AVERAGE INCOME: \$ 16,000

BIOCIDE CONSUMPTION: \$ 136 M. Biocide consumption can be segmented into Disinfection (22 %), Preservation (56 %) and Water Treatment at (22 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the Ministry of Public Health of the Russian Federation.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include:

Department of state Epidemiological Control of Public Health Ministry of the Russian Federation.

Moscow Scientific and Research Institute of Disinfectology

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dead Sea Bromine, Dow, Kaustik, Khimpromusol, Lanxess, Lonza, Solikams, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS:

Agrorus, Bang & Bonsomer (Schulke), Brenntag, CataPAV, Chempack, Chemprom, Domen, ICC Chemical Corporation, KorChemKolor (KCC), SAFC, Techresurs, Transchemreactive, Univar, Vladlen Aksenov.

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Agrovit, Air Liquid	OAO "Lakokraska", Yaroslavl	Aquatoria (Geizer)
Bursintez	AO "Empils", Rostov-na-Donu	Baker Petrolite, Kemira
Dezsnab	Hempel Paints	Ecolab Nalco
Sealed Air Diversey	Jotun Paints, Kotovsk Paint	Soda Khlorat
Ecolab	ZAO "Zagorsk Paint Plant"	Weatherford
Gigiena	Stroykomplekt	
Metafrax		
ZAO Disinfection		

SAUDI ARABIA 2017

POPULATION: 32 Million

AVERAGE INCOME: \$ 31,000

BIOCIDE CONSUMPTION: \$ 63 M. Biocide consumption can be segmented into Disinfection (28 %), Preservation (33 %) and Water Treatment at (39 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered by Ministry OF Health.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun	Avon Personal Care	Baker Petrolite
Beiersdorf	Akzo Paints	Kemira
Sealed Air Diversey	L'Oreal	Ecolab Nalco
Reckit Benckiser	P&G	Weatherford

SERBIA 2017		
POPULATION: 9 Million		
AVERAGE INCOME: \$ 14,000		
BIOCIDE CONSUMPTION: \$ 16.8 M. Biocide consumption can be segmented into Disinfection (31 %), Preservation (44 %) and Water Treatment at (25 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered by ECHA		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Beiersdorf	Helios	
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Tikkurila	Ecolab Nalco
Reckit Benckiser	L'Oreal	

SINGAPORE 2017		
POPULATION: 6 Million		
AVERAGE INCOME: \$ 53,000		
BIOCIDE CONSUMPTION: \$ 17.85 M. Biocide consumption can be segmented into Disinfection (47 %), Preservation (18 %) and Water Treatment at (35 %)		
BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 20 % via distributors and 55 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered for use by the Ministry of Health.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Galaxy, Guangzhou Tinci, Planet Chemicals, Salicylates, Solvay, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, Connell Bros, GME Chemicals (Schulke), ICC Chemical Corporation, Megachem, Radiant Chemicals, SAFC, Univar		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
3M, Ecolab	Akzo Paint	
Gold Universal Maintenance	Jotun Paint	Buckman
Zenith Group, Lamsoon.	L'Oreal, Nippon Paint	Solenis
Suntecsingapore	Kansai Paint	Ecolab Nalco
Biosafe International	Wattyl Paint	GE
Jiheng		
Zagro		

SLOVAKIA 2017

POPULATION: 5 Million

AVERAGE INCOME: \$ 22,000

BIOCIDE CONSUMPTION: \$ 16.8 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (56 %) and Water Treatment at (19 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use Centre for Chemical Substances and Preparations

Mierova 19, 827 15 Bratislava

Phone: +421 2 4854 4511

BPR, CLP and REACH helpdesk website

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Many of the Slovakian trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS:

BASF, Clariant, Dead Sea Bromine, Dow, Lanxess, Lonza, Schulke, Solvay, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: ACE Trade (Schulke), Ansil, Biesterfeld Silcom, Brenntag, ICC Chemical Corporation, RHEA SPOL (Schulke), SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Air Liquid, Sealed Air Diversey	A Bkosmetika, Henkel	Fytomedia
Ecolab	Duslo	Ecolab Nalco
Viares	Keramika, L'oreal	Vysk Ustav

SLOVENIA 2017		
POPULATION: 2 Million		
AVERAGE INCOME: \$ 27,000		
BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (30 %), Preservation (40 %) and Water Treatment at (30 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides must be registered via BPR Chemical Office of the Republic Slovenia, Ajdovščina 4 SI-1000 Ljubljana. Telephone: + 386 14 00 60 6 Email BPR: biocidi.uzk (at) gov.si		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Kika	Borosol	
Beiersdorf	Akzo Paints	Kemira
Sealed Air Diversey	Durolit	Ecolab Nalco
Reckit Benckiser	L'Oreal Household Products	
Vitva	Unilever	

SOUTH AFRICA 2017

POPULATION: 55 Million

AVERAGE INCOME: \$ 12,000

BIOCIDE CONSUMPTION: \$ 24.15 M. Biocide consumption can be segmented into Disinfection (26 %), Preservation (52 %) and Water Treatment at (22 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by the national Department of Agriculture in consultation with the national Department of Health. The exception is disinfectants which fall solely under the department of Health (Food, Cosmetics and Disinfectants act). The Contact Bruce Breedt at SA Bureaux of Standards on breedtvb@sabs.co.za

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include:

Cosmetic & Toiletry Association
 LIRI Technologies: Specialist Institute for Leather
 South African Institute of Packaging
 South African Wood Preservers Association

MAIN BIOCIDES PRODUCERS: Aquachlor, Ashland, BASF, DOW Dupont, Galaxy, Lanxess, Lonza, Schulke, Solvay, Sunpu, Thor, Troy, Vivimed.

MAIN BIOCIDES DISTRIBUTORS: Aorta, Brooks, Brenntag, Chemical & Industrial Marketing, Chempro, CJ Petrow, Hexachem, IMCD, Savannah Fine Chemicals (Schulke), Servochem, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Adcock	Akzo Paint	Ashland, Buckman
Durotec	Amka Personal Care	Chemfit
Ecolab	Barloworld Paint, BASF Latex	Darex
IndustroClean	Chet Personal Care	GE
Sealed Air Diversey	Colgate Personal Care	
Kenochem	Johnson & Johnson Personal Care	Landkem
Wetrok	Justine	Ecolab Nalco
	P&G, Plascon Paint	
	Sara Lee	

SOUTH KOREA 2017

POPULATION: 50 Million

AVERAGE INCOME: \$ 33,000

BIOCIDE CONSUMPTION: \$ 106.05 M. Biocide consumption can be segmented into Disinfection (23 %), Preservation (61 %) and Water Treatment at (12 %).

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered with the Ministry of Health and approved by ECL.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and Trade Associations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information.

Examples include:

Korea Forest Research Institute

Korea Paint & Printing Ink Industry Cooperative

MAIN BIOCIDES PRODUCERS: AH Sung Fine Chemical, Clariant, Dae Lim, Dow, Lanxess, Lonza, OCI (formerly DC Chemical), Sukgyung, Sunkyong, Thor, Troy

MAIN BIOCIDES DISTRIBUTORS: Buhmwoo Co (Schulke), Chun Kyung, CS Intec, Kang Nam, Sam Jung, Zenochem Korea, Zeus Chemtech (Schulke)

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Chemsfield Korea	AmorePacific, Byucksan Paint	Bokyoung Corp
Ecolab	Daehan Paint,	Ge
Dueko	Korea Chem Paint, Kunsul Paint, LG Household	Hansu
Samsung Fine Chemicals	Mapei Adhesives	Korea Aqua Chemicals
	Wacker Latex	Veolia

SPAIN 2017

POPULATION: 46 Million

AVERAGE INCOME: \$ 32,000

BIOCIDE CONSUMPTION: \$ 94.5 M. Biocide consumption can be segmented into Disinfection (26 %), Preservation (39 %) and Water Treatment at (35 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by Ministry of Health, Social Services and Equality
 Paseo del Prado 18-20, 28071 Madrid
 Email: biocidas-helpdesk (at) msssi.es

ORGANISATIONS SUPPORTING BIOCIDES:
 Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include: Plastics ANAIP (Madrid)
 Many of the Spanish trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, BASF, Chemipol, Chemtura, Clariant, Dead Sea Bromine, DowDupont, Janssen, Lamirsa, Lanxess, Lonza, PerOxychem, Solvay, Stepan, Textra, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Comindex, Deltachem Iberica, ICC Chemical Corporation, Irisem, SAED, SAFC, Ultra Quimica, Univar, Zeus Quimica (Schulke).

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Acideka	Adoral	A & B Laboratorios de Biotecnologia
Betelgeux	Barnicles Valentine	Adiquimica
CPQ Iberica	Barpimo	Ercros
Sealed Air Diversey	Beissier	Hispaquimicatz
Ecolab	Industrias Juno	Inima
Medichem	Jallut	Sertec
Satecmc		Simarsa
		Tuguinsa

SWEDEN 2017

POPULATION: 10 Million

AVERAGE INCOME: \$ 34,000

BIOCIDE CONSUMPTION: \$ 46.2 M. Biocide consumption can be segmented into Disinfection (34 %), Preservation (50 %) and Water Treatment at (16 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 30 % via distributors and 55 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered for use by Swedish Chemicals Agency P.O Box 2, SE 172 13 Sundbyberg Telephone: +46 8 5194 1100; +46 8 519 41122. More information on www.kemi.se

For the future, as a member of the European Union, Sweden will implement the European Biocides Products Directive when the transition period for the Directive comes to an end on 14th May 2014.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include: International Research Group (IRG), Swedish National Testing & Research Institute, YTKEMISKA INSTITUTET (Institute for Surface Chemistry). Many of the Swedish trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Akzo Nobel, Bactiguard, BASF, Buckman, BWA Water Services, Chemtura, Clariant, Dead Sea Bromine, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Schulke, Solvay, Stepan, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Bionord (Schulke), Bjorn Thorsen, Brenntag, Bröste, Ecpwest, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Bioglan	Akzo Nobel	Bim Kemi
Euroclean	HP Fluegger	Eka
Ewos Pherrovet		GE
Molnycke		Kemira
SCA		Ecolab Nalco
		Swedchem

SWITZERLAND 2017

POPULATION: 8 Million

AVERAGE INCOME: \$ 42,000

BIOCIDE CONSUMPTION: \$ 39.9 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (53 %) and Water Treatment at (16 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are registered with the Swiss Federal Office of Public Health, Division of Chemical Products.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Many of the Swiss trade bodies are affiliated to European bodies such as AISE (European trade association for the Soaps and Detergents Industry. www.aise-net.org), ASTM (International Standards), CEPE (European trade association for Paints), COLIPA (European trade association for the Cosmetics and Toiletries industry. www.colipa.com) EN (European Standards), EWPM (European trade association for Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU. www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Heiq, Lanxess, Lonza, Schulke, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, Univar, Azelis, IMCD.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Baer, BBraun, Bode, Borer	Akzo Nobel	Ashland
Cardinal, Desomed, Sealed Air Diversey	Beiersdorf	Ecolab Nalco
Ecolab	Henkel	
Oroclean, Saniswiss, Schulke	L'Oreal	

TAIWAN 2017		
POPULATION: 23 Million		
AVERAGE INCOME: \$ 39,000		
BIOCIDE CONSUMPTION: \$ 29.4 M. Biocide consumption can be segmented into Disinfection (29 %), Preservation (43 %) and Water Treatment at (28 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 35 % via distributors and 55 % via formulators and service companies.		
REGULATORY BODY: Biocides have to be registered for use by the National Standards of the Taiwan Government.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information. Trade Associations include: Taiwan Paint Industry Association		
MAIN BIOCIDES PRODUCERS: BASF, Clariant, Dead Sea Bromine, Dow, FMC, Janssen, Lanxess, Lonza, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Allied Dyestuffs & Chemicals (Sanitized), Benvict Chemical , Borica, Forchem, Giftstart Trade, ICC Chemical Corporation, Lica Enterprise, Rich Country Chemical Corporation, Taiwan San Lee Chemical, Univar, Worldwide Resin & Chemicals (Schulke), Yong Fun Trading. There is a big reliance on Distributors.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
China Bestar Laboratories	Akzo Paints	Florex Insultation
Ecolab	Youn Chi Paints	National Starch
GiaGen Enterprises	Dairen Polymer Emulsions	TKK Corporation
Lee Chang Yuang Chemical		
Medibiot, Pookoo Industry		
Tai Wei Chemical Industry		

THAILAND 2017		
POPULATION: 68 Million		
AVERAGE INCOME: \$ 10,000		
BIOCIDE CONSUMPTION: \$ 29.4 M. Biocide consumption can be segmented into Disinfection (43 %), Preservation (25 %) and Water Treatment at (32 %)		
BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.		
REGULATORY BODY: Biocides are registered with the Health Ministry.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, DowDupont, Galaxy, Lanxess, Lonza, Resil Chemicals, Sanitized, Schulke, Solvay, Thor, Troy, Vivimed.		
MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, DKSH (Schulke), IMCD, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Akzo Nobel Paints, BASF Paint	Ashland
Ecolab	Asian Paints, Kansai Paint	Ecolab Nalco
	Nippon Paint, J & J Cosmetics, Sika Construction Products	

TURKEY 2017		
POPULATION: 79 Million		
AVERAGE INCOME: \$ 13,000		
BIOCIDE CONSUMPTION: \$ 36 M. Biocide consumption can be segmented into Disinfection (28 %), Preservation (48 %) and Water Treatment at (24 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 50 % via distributors and 40% via formulators and service companies.		
REGULATORY BODY: Biocides must be registered for use by the Department of Protection and Control, Ministry of Agriculture, Tarım ve Köyişleri Bakanlığı, Koruma ve Kontrol Genel Müdürlüğü, Akay Cad. No:3 06100, Bakanlıklar / Ankara. More information on www.biyosidal.saglik.gov.tr		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Buckman, Chemtura, Clariant, Dead Sea Bromine, Dow, Etimine, Janssen, Lanxess, Lonza, Schulke, Rudolf, Rutgers, Solvay, Thor, Troy		
MAIN BIOCIDES DISTRIBUTORS: Aykim Kimya Sanayi, Brenntag, Cagla Medikal, ICC Chemical Corporation, Ilsan Pharm (Schulke), Kimteks Kimyasal (Schulke), Ozgun Kimya (Schulke), Parkoteks Kimya (Schulke), Optima Kimya Sanayi (Sanitized), SAFC, Tempo Dis Ticaret, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Air Liquid, Sealed Air Diversey	Avon Personal Care, Aysan Boya Kim Paint	
Ecolab	Betek Boya Kimya	GE
	Denbas Boya VE Kimya Sanayi	Kimya Sanayi
	Ishakel Boya	Ecolab Nalco
	Marshall Boya San	
	P & G Cosmetics	
	Evyap Sabun Comsetics	
	Eczacibasi Cosmetics	
	Ihlas Kimya Cosmetics	
	Hayat Kimya Sanayi	

UKRAINE 2017

POPULATION: 43 Million

AVERAGE INCOME: \$ 7,000

BIOCIDE CONSUMPTION: \$ 12.6 M. Biocide consumption can be segmented into Disinfection (50 %), Preservation (17 %) and Water Treatment at (33 %)

BIOCIDE DISTRIBUTION: 15 % goes direct to end-users followed by 60 % via distributors and 25 % via formulators and service companies.

REGULATORY BODY: Biocides are registered with the Health Ministry.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.

MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, DowDupont, Lanxess, Lonza, Schulke, Solvay, Thor and Troy.

MAIN BIOCIDES DISTRIBUTORS: Azelis, Bang & Bonsomer (Schulke), Brenntag, IMCD, Medprominvest (Schulke), Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun	Akzo Nobel	Ecolab Nalco
Sealed Air Diversey	Beiersdorf	Kemira
Ecolab	Henkel	
	Johnson & Johnson	
	Wacker Latex	

UNITED ARAB EMIRATES 2017

POPULATION: 10 Million

AVERAGE INCOME: \$ 30,000

BIOCIDE CONSUMPTION: \$ 26.25 M. Biocide consumption can be segmented into Disinfection (24 %), Preservation (40 %) and Water Treatment at (36 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides must be registered by Disinfection for food industry is regulated by Min.of Health Care

Disinfecting water tanks is regulated by Platinum Water Treatment Technologies

Surface disinfection is regulated by Dubai Municipality.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, DowDupont, Galaxy, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Sharon, Thor, Troy, Vivimed.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
BBraun	Asian Paints	Baker Petrolite
Henkel	Akzo Paints	Kemira
Sealed Air Diversey	Carparol	Ecolab Nalco
Reckit Benckiser	Jotun,	Weatherford
	Kansai Paint	
	L'Oreal	
	Unilever Personal Care	

UNITED KINGDOM 2017

POPULATION: 65 Million

AVERAGE INCOME: \$ 36,000

BIOCIDE CONSUMPTION: \$ 250 M. Biocide consumption can be segmented into Disinfection (46 %), Preservation (21 %) and Water Treatment at (33 %)

BIOCIDE DISTRIBUTION: Brenntag, ICC Chemical Corporation, SAFC, Univar.

REGULATORY BODY: Biocides must be registered for use by the Health and Safety Executive (HSE) Chemicals Regulation Directorate

4N.G Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS

Telephone: +44 151 951 3317

Email: biocidesenquiries (at) hse.gsi.gov.uk

BPR website: More information can be found on www.hse.gov.uk/biocides

For Disinfection and Agriculture, biocides must receive approval from DEFRA (Department for Environment, Food and Retail Affairs).

ORGANISATIONS SUPPORTING BIOCIDES:

British Plastics Federation, Building Research Establishment, British Coatings

Federation, BLC – British Leather Technology Centre (www.blcleathertech.com)

The Paint Research Association (www.pra.org.uk), International Organisation for

Standardisation at www.iso.org, Wood Preservation, British Wood Preserving and

Damp Proofing Association (www.bwpdp.co.uk)

Many of the UK trade bodies are affiliated to European bodies such as AISE

(European trade association for the Soaps and Detergents Industry. www.aise-net.org),

ASTM (International Standards), CEPE (European trade association for Paints),

COLIPA (European trade association for the Cosmetics and Toiletries industry.

www.colipa.com) EN (European Standards), EWPM (European trade association for

Wood Preservatives) and OECD (Environment, Health & Safety Division of the EU.

www.oecd.org) which sets standards for Biocides.

MAIN BIOCIDES PRODUCERS: Addmaster, Ashland, BASF, Buckman, BWA Water Services, Clariant, Dead Sea Bromine, DowDupont, Galaxy, Janssen, Lanxess, Lonza, Oxychem, RioTinto, Solvay, Stepan, Thor, Troy, Vivimed.

MAIN BIOCIDES DISTRIBUTORS: Elton Chemicals, Pharmex, Univar

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Clover Chemicals	Akzo Nobel	Cavion
Coventry Chemicals	PPG	GE
DEB	Sherwin Williams	Ecolab Nalco
Sealed Air Diversey	Leigh Paint	Safeox
Ecolab		Warwick
Evans Vanodine		
SCA		

URUGUAY 2017

POPULATION: 3 Million

AVERAGE INCOME: \$ 16,000

BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (30 %), Preservation (40 %) and Water Treatment at (30 %)

BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.

REGULATORY BODY: Biocides are not registered for use.

ORGANISATIONS SUPPORTING BIOCIDES:

Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include:

International Standards (www.astm.org)

MAIN BIOCIDES PRODUCERS: Ashland, BASFDupont, Buckman, BWA Water Services, Clariant, Dow, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.

MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.

BIOCIDE ENDUSERS

Disinfection	Preservation	Water Treatment
Ecolab	Avon Personal Care	
	Akzo Paints	Kemira
Sealed Air Diversey	PPG	Ecolab Nalco
Reckit Benckiser	Dial Household Products	
	Sherwin Williams Paint	
	Sika Sealants, SC Johnson	
	Unilever Personal Care	

USA 2017
POPULATION: 324 Million
AVERAGE INCOME: \$ 45,000
BIOCIDE CONSUMPTION: \$ 2018.1 M. Biocide consumption can be segmented into Disinfection (19 %), Preservation (50 %) and Water Treatment at (31 %)
BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 30 % via distributors and 45 % via formulators and service companies.
<p>REGULATORY BODY: Biocides must be registered for use by the U.S. Environmental Agency (www.epa.gov/pesticides) which requires manufacturers to submit data that demonstrates the effectiveness of the product.</p> <p>In addition to these regulations, biocides may be subjected to other regulations. For example, biocides used in cleanrooms are subject to FDA and USP guidelines, which classify them, describe their mechanism of action and efficiency, and request minimum efficacy levels and describe how to get the disinfection process validated. The U.S. Food and Drug Administration (www.fda.gov/).</p> <p>As legislation regarding the use of Antimicrobials may vary from region to region, local regulations should always be consulted concerning their status. The EPA provides protocols to evaluate Biocide efficacy. Once a Biocide is registered with the regulatory body, it can then be further recommended by industry bodies such as the American Wood Preservatives Association.</p>
<p>ORGANISATIONS SUPPORTING BIOCIDES:</p> <p>Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.</p> <p>Examples include:</p> <ul style="list-style-type: none"> American Association of Textile Chemists & Colorists. American Cleaning Institute (ACI) American Chemistry Council Biocides Panel American Standards Consumer Specialty Products Association (CSPA) Germicides & Preservatives, American Meat Institute (www.meatami.com) Germicides, Centre for Disease Control (www.cdc.gov/) Green Seal (Have standards which reflect if product is made from materials with low environmental impact) International Standards (www.astm.org) Master Painters Institute National Food Processors Association (http://fpa-food.org/) National Institute for Occupational Safety (NIOSH at www.cdc.gov/niosh/) National Meat Association (http://nmaonline.org) North American Meat Processors (www.namp.com) Occupational Safety & Health Administration (OSHA at www.osha.gov/) U.S. Department of Agriculture (www.usda.gov/wps) Preservation, International Organisation for Standardisation at www.iso.org Preservation, ASTM are test methods to determine the activity of Antimicrobials Wood Preservation, International Research Group (www.irg.net) Wood Preservation, American Wood Preservers Association (www.awpa.org)
MAIN BIOCIDES PRODUCERS: Albemarle, Ashland, BASF, Borax, Buckman, BWA Water Services, Clariant, Dead Sea Bromine, DowDupont, Galaxy, Janssen, Koppers,

Lanxess, Lonza, Oxychem, Peroxychem, Pilot, Sanitized, Solvay, Stepan, Thor, Troy, Vivimed, West Agro.

MAIN BIOCIDES DISTRIBUTORS: Azalea Color, Brenntag, CheMarCo, Chem-Materials, ChemTech Specialties, Chidley & Peto, Connell Bros, D & F Distributing, D.A. Campbell, Dar-Tech, Deeks & Company, Dowd and Guild, D.B. Becker, D.N. Lukens, Durr Marketing, E.T. Horn, Eagle Specialty Products, GMZ, G.R. O’Shea, Helm, George C Brandt, Harry W. Gaffney & CO, J. F. Shelton Company, Kohl Marketing, Landman Chemical, Lintech International, Majemac Enterprises, Maroon, McCullough & Associates (Schulke & Mayr), M.F. Cachat, New Source Naturals, Penta, Raw Materials Corp, Ribelin Sales Inc, Ross Organic, TCR Industries, T.H. Hilson, The Argus Co, TMC Materials, TRI-ISO, Univar, Van Horn Metz & Co, Vivion, Walsh & Associates (Ionpure).

BIOCIDES ENDUSERS

Disinfection	Preservation	Water Treatment
Apollo	Akzo Paint, Benjamin Moore,	Baker Petrolite
Cantel, Clorox	Celanese Latex, Colgate Palmolive	Ecolab Nalco
Gojo Industrias	Duron	GE Water
Ecolab	Flood Company	Garratt Callahan
Sealed Air Diversey	Kilz (www.masterchem.com)	
Minntech	PPG	Kemira, Solenis
National Services (Zep)	Procter & Gamble	Weatherford
	SC Johnson, Wacker Latex	

UZBEKISTAN 2017		
POPULATION: 30 Million		
AVERAGE INCOME: \$ 4,000		
BIOCIDE CONSUMPTION: \$ 21 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (50 %) and Water Treatment at (25 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 55 % via distributors and 35 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities, Associations and Trade Organisations are often used to support the use of a Biocide via laboratory testing which demonstrates efficacy and other relevant information. Examples include: International Standards (www.astm.org)		
MAIN BIOCIDES PRODUCERS: Ashland, BASF, Buckman, BWA Water Services, Clariant, DowDupont, Janssen, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Beiersdorf, Ecolab	Akzo Paints	GE
Henkel	Tikkurila Paints	Kemira
Sealed Air Diversey	Unilever Personal Care	Ecolab Nalco
Reckit Benckiser	Veteran Holding Paints	

VENEZUELA 2017		
POPULATION: 31 Million		
AVERAGE INCOME: \$ 13,000		
BIOCIDE CONSUMPTION: \$ 14.7 M. Biocide consumption can be segmented into Disinfection (64 %), Preservation (14 %) and Water Treatment (22 %)		
BIOCIDE DISTRIBUTION: 25 % goes direct to end-users followed by 20 % via distributors and 55 % via formulators and service companies.		
REGULATORY BODY: Biocides do not have to be registered.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Borax, Buckman, Clariant, Dow, IPEL, Lanxess, Lonza, Oxychem, Peroxychem, Thor, Troy, West Agro.		
MAIN BIOCIDES DISTRIBUTORS: Brenntag, ICC Chemical Corporation, Fehrmann (Schulke), SAFC, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Betterhome Products	Colgate	Solenis
Clorox	Procter & Gamble	Ecolab Nalco
SC Johnson	Reckitt Benckiser	

VIETNAM 2017		
POPULATION: 92 Million		
AVERAGE INCOME: \$ 4,000		
BIOCIDE CONSUMPTION: \$ 10.5 M. Biocide consumption can be segmented into Disinfection (25 %), Preservation (52 %) and Water Treatment at (22 %)		
BIOCIDE DISTRIBUTION: 10 % goes direct to end-users followed by 70 % via distributors and 20 % via formulators and service companies.		
REGULATORY BODY: Biocides are not registered in Vietnam.		
ORGANISATIONS SUPPORTING BIOCIDES: Universities and trade associations are often used to support the use of Biocides via laboratory testing which demonstrates efficacy and other relevant information.		
MAIN BIOCIDES PRODUCERS: BASF, Buckman, Clariant, Dow, Lanxess, Lonza, Schulke, Thor and Troy.		
MAIN BIOCIDES DISTRIBUTORS: Azelis, Brenntag, DKSH, IMCD, Univar.		
BIOCIDE ENDUSERS		
Disinfection	Preservation	Water Treatment
Sealed Air Diversey	Asian Paints, Akzo Nobel	Solenis
Ecolab	Jotun Paints	Ecolab Nalco
	L'Oreal Shampoo	
	Nipsea, Petrolimex Paints	
	Procter & Gamble	
	Shiseido Cosmetics	
	Toa Paint	