

Water disinfection, treatment and purification (water quality securing) 2004-2005-2010-2015

**State 2004 and Development up to 2015, Markets,
Technologies, Companies including the application of
nanotechnologies and molecular technologies, 57 countries
worldwide in comparison**

The costs and prices of water in the future will largely depend on the disinfection necessity and the applied technologies.

I. Introduction

The markets for water disinfection, water purification and securing water quality with other methods is growing worldwide between 8 and 25 percent depending on the sector, branch and country. Water Disinfection is a study about water disinfection, purification and info/control automation in total including the most recent technological innovations with nanotechnologies and molecular technologies. These new technologies will change the water treatment markets in the next 10 years dramatically. The costs and prices of water in the future will largely depend on the disinfection necessity and the applied technologies.

Several million people die every year on contaminated water. Mostly in developing countries but also in industrialised countries. The water quality is declining. Different water sectors face problems to keep the early water quality through conventional treatment/disinfection approaches. Meanwhile the water quality regulations are becoming more stringent, complex and costly. Last but not least, the concerns about the biotech pollution or terrorism challenge the capability of water disinfection as well. In this study different water disinfection/purification methods will be discussed. This includes physical and chemical processes such as the usage of chlorine, UV, ozonization, filtration and membrane processes with pathogen removal, and also thermal processes such as distillation, evaporation/condensation, and steam stripping, to name a few. A special part about nanotechnology and molecular technology is added in the study for the first time. The molecular featured processes represent the developing trend of water disinfection/purification because of their efficiency, preciseness and high performance-price ratio. A number of nanotechnologies are already utilised in membrane process and UV disinfection. More applications are to be found in more sectors in the water disinfection industries during the next years.

The market prospects in the field of water disinfection/purification is very promising, with the current market value of 20 billion US dollars and with the increasing demands for clean water, we can expect a high growth of investment and sales in the special segment of water disinfection and water quality maintaining. This study examines the market development of water purification/disinfection industries worldwide, for the years 2004-2015, respectively in the fields of drinking water, wastewater and water treatment.

Helmut Kaiser Consultancy is a leading consulting company in the fields of water industry and environment industry worldwide for more than 20 years. Over 700 studies have been elaborated based on our knowledge and experience in the business. For a list of our most recent studies in water industry please see <http://www.hkc22.com/water.html>.

II. Goal of the Study

The study provides an efficient, systematic and reliable way to know trends, opportunities and risks in water disinfection industry and to evaluate present situation and further development as well, identifies and evaluates the growth and profit opportunities within the segments of technologies/markets and value chain. It deals with the following technology sectors:

- Drinking water, bottled water, swimming pool water
- Water/Industrial Water disinfection
- Disinfection of waste water in industry and municipality
- Application of emerging membrane technology
- Potential application of future technologies like nanotechnology or molecular technologies

The study is constructed by sectors and can be obtained either completely, or each sector separately. The markets are presented by countries/regions and by technologies/processes, as well as by applications and branches.

The study provides an analysis and profiles, as well as presentation of the leading water disinfection companies and their factors of success and technology portfolio.

III. Table of contents

0. Management summary

The most important results and contents of the study are summarized. The summary can be acquired separately.

Study:

1. Markets

- 1.1 Overview of water disinfection market worldwide
- 1.2 Total market for water disinfection by applications
- 1.3 Total market for water disinfection by technologies/processes
- 1.4 Total market for water disinfection by regions and 57 countries respectively

2. Market segmentation by fields of application

- 2.1 Drinking water and bottled water (for drinking use)
- 2.2 Industrial water
- 2.3 Groundwater
- 2.4 Municipal wastewater
- 2.5 Industrial wastewater
- 2.6 Households and enterprises disinfection
- 2.7 Drinking water (including swimming pool water)
- 2.7 Water supply and power plants
- 2.8 Others

3. Market segmentation by technologies/processes

- 3.1 Disinfection (Primary disinfection)
 - 3.1.1 Use of chlorine

- a. Chlorine gas/hypochlorous acid
 - b. Chloramination
 - c. Chlorine dioxide
- 3.1.2 Ozonization
- 3.1.3 Ultraviolet (UV) disinfection
- 3.1.4 Ultrasonic
- 3.1.5 Alternative chemical disinfectants
 - a. Peracetic acid
 - b. Formalin
 - c. Hydrogen peroxide
 - d. Bromine
 - e. Iodine
- 3.1.6 Electron beam irradiation
- 3.1.7 Filtration processes with pathogen removal
- 3.1.8 Membrane processes
 - a. Ultrafiltration and reverse osmosis
 - b. Micro- and nanofiltration
 - c. Electrodialysis
- 3.1.9 Thermal processes
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- 3.3 Diagnosis and testing
 - 3.3.1 On-site testing
 - 3.3.2 Laboratory diagnosis
- 3.4 Monitoring
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 - a. Free chlorine residual
 - b. Chlorine dioxide residual
 - c. Monochloramine residual
 - d. Ultraviolet (UV) light
 - e. Membrane processes
 - f. Filtration processes
 - g. Turbidity
 - h. Others
 - 3.4.2 Maintenance of disinfectant residual in distribution system

4. Market segmentation by branches

- 4.1 Chemical/pharmaceutical
- 4.2 Medicine/laboratory
- 4.3 Power supply
- 4.4 Metal/ iron production
- 4.5 Food/semiluxury/beverage
- 4.6 Paper/pulp
- 4.7 Motor vehicles production and parts supply
- 4.8 Electronics/electrical engineering
- 4.9 Tourist/hotel
- 4.10 Private/household
- 4.11 Municipality
- 4.12 Special application in the Life Science
- 4.13 Others

5. Market segmentation by countries/regions

Overview and statistical data in the fields of water treatment in the following countries:

Western Europe

Germany
France
Italy
Great Britain
Ireland
Spain
Portugal
Netherlands
Norway
Sweden
Finland
Denmark
Austria
Switzerland
Turkey
Rest WE

Eastern Europe / CIS

Czech Republic
Poland
Hungary
Rest OEU / MEU
Russia
Turk-Countries
Rest CIS

NAFTA

USA
Canada
Mexico

South and Middle America

Venezuela
Argentina
Brazil
Columbia
Chile
Rest S/M America

Asia / Australia

Japan
China
Korea
Rest N/E Asia
India
Pakistan
Singapore
Vietnam
Thailand
Rest South Asia
Australia
New Zealand

Middle East

Israel
UAE
Saudi Arabia
Iran
Iraq
Egypt
Rest Middle East

Africa

South Africa
Morocco
Algeria
Tunisia
Libya
Rest Africa

Worldwide Summary

6. Technology development

- 6.1 Guidelines of technology development
- 6.2 Biotechnology
- 6.3 Nanotechnology
- 6.4 Environment technology
- 6.5 Energy

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- 7.1 Laws, regulations and execution in water treatment/disinfection in EU
 - a. Overview EU
 - b. EU water protection regulation
 - c. Ecology-oriented environmental policy of the EU
 - d. Comparison of countries' standards
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- 7.3 Laws, regulations and execution in Asia
 - a. Overview Asia
 - b. China
 - c. Japan
- 7.4 Comparison of laws, regulations and execution in other regions

8. Competition

- 8.1 Leading companies in water/wastewater industries worldwide and by regions
- 8.2 The most important competitors in water disinfection worldwide and by regions
- 8.3 Profiles of selected competitors

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- 9.1 Value chain and value added points in water disinfection industry
- 9.2 Chances and risks
- 9.3 Influencing factors for investment decisions and choices of technology in water disinfection
- 9.4 Influencing factors for investment decisions and choices of technology in water treatment
- 9.5 Decision structures of potential customers
- 9.6 Strategy oriented to customer requirements
- 9.7 Sales-oriented strategies
 - 9.7.1 Customer-based strategies
 - 9.7.2 Cooperation-based strategies
 - 9.7.3 International-based strategies
 - 9.7.4 Price-based strategies
- 9.8 Enforcing market positions --- profitability
- 9.9 Summary: elements for a successful strategy orientation

IV. Structure of the Study/Time Schedule

The total study is divided by applications, technologies, branches or countries/regions into several segments which can be obtained separately.

All parts or segments include: Summary, state of technology and developments, survey of markets and prospects 2004-2005-2010-2015 in turnover, market volume and potential, companies, competition, regulations and market analysis.

The study is finished and can be delivered immediately.

V. Methods of Investigation

The study is based on the following methods: Desk and Field Research. Market potentials and prospects are gathered by the Delphi-Method. Here specialists in the market are questioned about their future expectations which are then narrowed through repeated coordination with the specialists.

VI. Qualification

Our company has been active in the field of water industry, environmental and energy technology for 25 years. We prepare exclusive international strategies, concepts and special studies for company groups, small and middle sized businesses and Western European government agencies. Until today we have completed more than 700 studies.

Reply Form

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Study: Water disinfection, treatment and purification (water quality securing 2004-2005-2010-2015)

We would like to order:

Price in Euro (per segment)

Total Study Worldwide	4,200.-
Segment of one region/country	1,900.-
Segment of one application	1,900.-
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Segment of one branch	1,900.-

Management summary
Presentation of a study/workshop
Strategy development

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