

# **Safety, Health and Environmental Protection 2010**

## Roche Basel and Kaiseraugst



# Key figures 2010

## Roche Group

Activity	Pharmaceutical and diagnostic products for the prevention, diagnosis and treatment of diseases
Sales	CHF 47,473 million
Net income	CHF 8,891 million
Number of employees worldwide	80,653

## Roche Basel and Kaiseraugst

Activity	Research, development, chemical, biotech and pharmaceutical production, packaging, administration, corporate functions
Number of employees	8,867
Chemical production volume <sup>3</sup>	462 t
Pharmaceutical production volume, (solid dosage forms) <sup>3</sup>	382 t

## The people

Total number of days worked	1,865,084
Occupational accidents <sup>1</sup>	63
Working days lost through occupational accidents	1,163
Roche Accident Rate, occupational accidents <sup>2</sup> in Basel and Kaiseraugst	0.104 / 0.338
Number of non occupational accidents	420
Working days lost through non occupational accidents	7,099
Occupational illnesses	42

## \*Abbreviations

VOC = volatile organic compounds

TOC = total organic carbon

WTF = wastewater treatment facility

SHE = Safety, Health and Environmental Protection

FHC = Fluorinated Hydrocarbons

<sup>1</sup> Including TAVERO AG and temporary employees (recorded since 2003)

<sup>2</sup> Number of working days lost per employee and year

<sup>3</sup> Roche Basel

Unless otherwise stated, the information in this brochure refers to the Basel site, which also includes the Kaiseraugst facility.

## The people

CO <sub>2</sub> emissions	42 915 t
NO <sub>x</sub> emissions	15 t
SO <sub>2</sub> emissions	0.2 t
VOC* emissions	49 t
FHC* emissions	373 kg
Volume of industrial wastewater	255,000 m <sup>3</sup>
TOC* in wastewater (WTF* discharge)	13 t
Heavy metals in wastewater (lead, zinc, WTF* discharge) <sup>3</sup>	21 kg
Chemical waste <sup>3</sup>	5,501 t
Internal recycling <sup>3</sup>	5,858 t

## Resources

Full-time employees in SHE*	184
Investment in SHE*	CHF 40.2 million
SHE* operating expenses	CHF 45.3 million
Total energy consumption	1,223 TJ
Raw materials used in chemical production <sup>3</sup>	931 t
Raw materials used in pharmaceutical formulation (solid delivery forms) <sup>3</sup>	387 t
Total solvent consumption <sup>3</sup>	4,419 t



**Key figures**

2

**Introduction**

5

**The people**

6 Occupational accidents

8 Non occupational accidents

**The environment**

11 Emissions into the air

12 Emissions into water

13 Recycling, re-use and disposal of waste

**Resources**

14 Energy consumption

15 Our employees

16 Water consumption

17 Consumption of raw materials and solvents

**Principles**

18 Reporting principles



# Introduction

Roche is committed to health. Environmental protection and the safety and wellbeing of our employees are accorded the same priority as improved health, quality of life and survival for patients.

This philosophy enables us to live up to our social responsibility at our Basel<sup>1</sup> site too – safety, health and environmental protection (SHE) are an integral part of our business activities.

This brochure is designed to give you an overview of our SHE activities in 2010. Our particular intention is to illustrate the long-term trends in clear graphics.

Our efforts are focused on continuous, sustainable optimisation. We can look back with satisfaction on our achievements last year. In 2010, for example, the REACT Award (Roche Environmental Awareness in Chemical Technology), which is presented annually by the Group, was again won by Basel. It was awarded in recognition of our success in developing sustainable and environmentally compatible syntheses. We also won the 2010 Roche Responsible Care Network Award for our success in saving energy.

These gratifying and positive results motivate us to maintain and enhance our efforts for the benefit of our employees, society and the environment.

<sup>1</sup>For the first time we have incorporated the figures for the Kaiseraugst facility into the figures for the Basel site.

# The people – improving safety at work, reducing absences

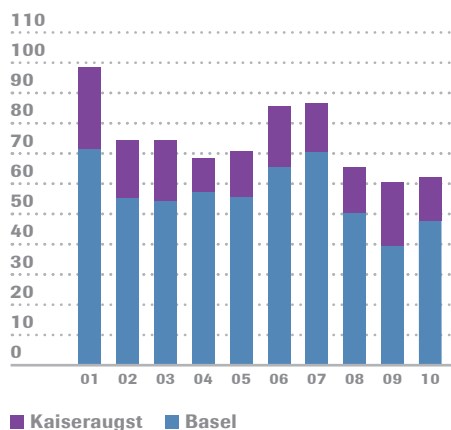
Accidents can only be effectively prevented if employees are able to recognise potential dangers and assess them correctly. Our employees are trained to respond appropriately to risks, and this in turn promotes an active safety culture in the company.

### Occupational accidents

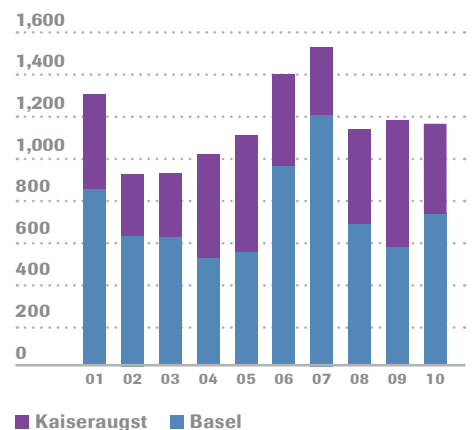
The number of occupational accidents increased slightly compared with the previous year. However, the overall long-term trend is downwards. The number of working days lost as a result

of occupational accidents remained the same at 1,163. The causes of all accidents are investigated thoroughly. This allows shortcomings to be identified and eliminated without delay so that the accident doesn't happen again.

Number of occupational accidents



Working days lost through occupational accidents





The investigations into the accidents that happen show that fewer and fewer are being caused by technical defects and that we need to concentrate our accident prevention efforts on modifying our employees' risk behaviour and on reducing inattentiveness at work if

we are to achieve further improvements. Safety training sessions that provide technical information and address safety-appropriate behaviour are held regularly for employees.

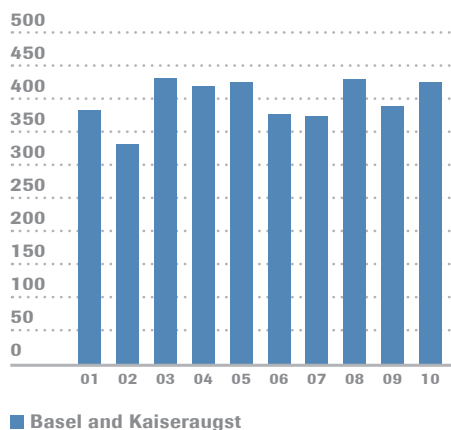
Promoting health awareness and a safety culture are among our top priorities. Employees who have been made aware of dangers to their health behave responsibly both at work and in their leisure time.

**Non occupational accidents**

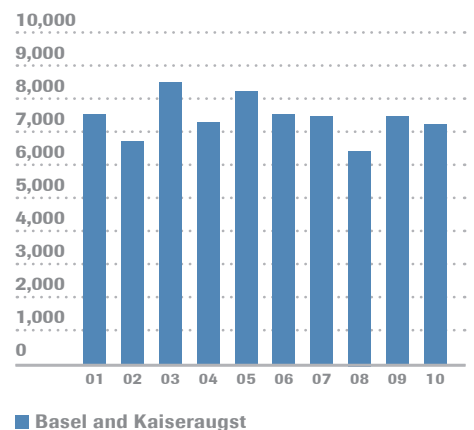
Evaluation of accident statistics allows us to identify hotspots and provide activities and information campaigns that target them.

Although there was a slight increase in the number of accidents recorded, the number of absence days caused by these accidents decreased by nearly four percent in spite of a two percent increase in headcount.

**Number of non occupational accidents**



**Working days lost through non occupational accidents**





Non occupational accidents are responsible for six times as many absence days as occupational accidents. A non occupational accident results in an average of 16.9 lost working days. Comparison of the statistics for occupational accidents and non

occupational accidents shows that many of them could be avoided if employees took the same approach to risk in their leisure time as during their working day. This means that employees also benefit outside work from the safety training they receive at Roche.

# The environment – our responsibility

An intact environment is an integral part of people's health and wellbeing. This is why Roche views environmental protection as more than just compliance with legal requirements.

At the Basel site we believe that we have a corporate responsibility to protect the environment. It is therefore integrated sustainably and actively into our business activities – from research and

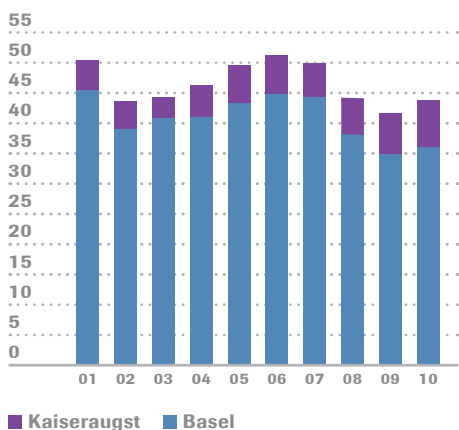
development to the manufacture of our products. Each employee makes a contribution to further reducing resource consumption and negative environmental impacts.



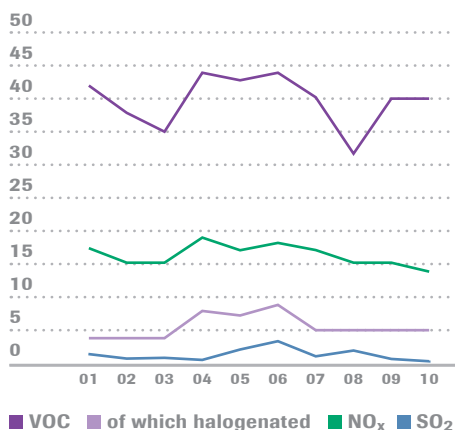
**Emissions into the air**

Emissions of air pollutants such as nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC) and halogenated VOC remained at the level of previous years.

**Emissions of carbon dioxide (thousands of tonnes)**



**Air pollutants emitted at Basel: VOC, NO<sub>x</sub>, SO<sub>2</sub> (tonnes)**



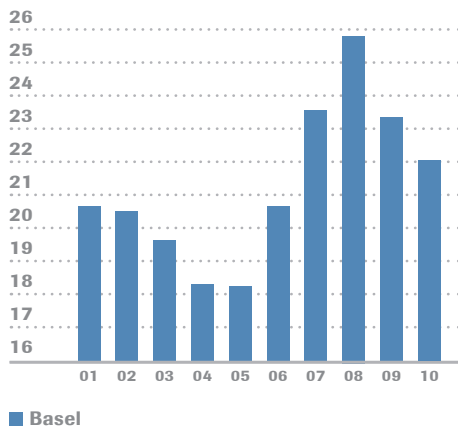
The activities we undertake to protect the vital natural resources of water, air, soil and the climate comply with high ecological standards. In doing so, we fulfil our responsibility to society.

**Emissions into water**

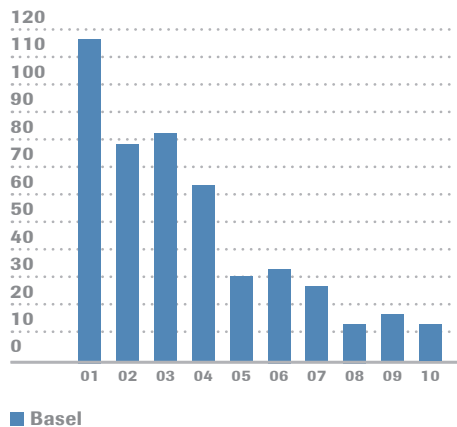
Our industrial wastewater is treated in wastewater treatment facilities. These facilities use biological wastewater treatment processes involving micro-organisms and physical and chemical

purification methods such as flocculation and flotation. At 97.3 percent, the biodegradability of the wastewater discharged from chemical production in Basel was close to the peak value recorded over several years.

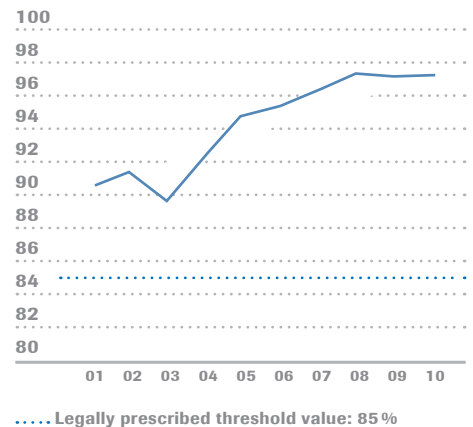
**Volume of industrial wastewater (tens of thousands of cubic metres)**



**Carbon load in the WTF discharge (tonnes)**



**Biodegradability of industrial water (%)**





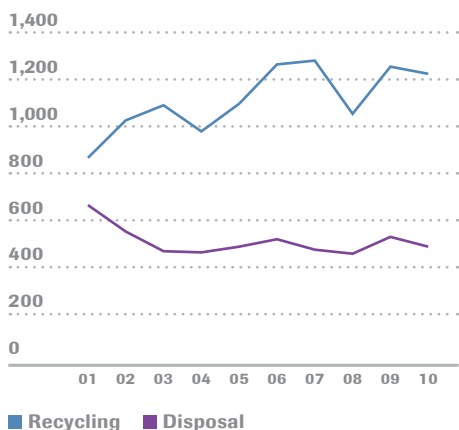
**Recycling, re-use and disposal of waste**

Avoid, recycle, dispose: this is the principle we apply to our waste management too. In 2010 the volume of general waste per employee at the Basel site was reduced yet again.

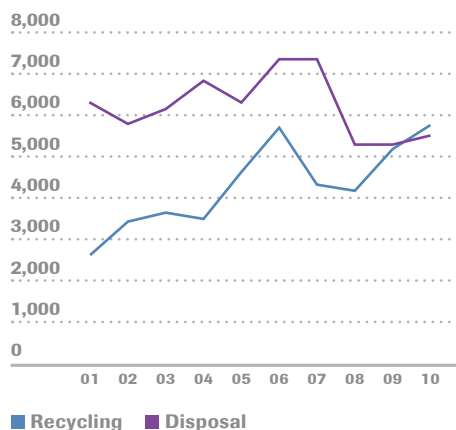
A large number of materials were recycled, enabling valuable raw materials and energy to be returned to the industrial process. Chemical waste that cannot be reused is disposed of at chemical waste centres in ways which do not place a burden on the environment.

We also accept our responsibility for cleaning up contaminated sites in which Roche was involved in the past. In 2010 the actual remediation of the Bonfol hazardous waste landfill started; Roche accounts for 4 percent of the volume of waste on this site.

**General waste, Basel and Kaiseraugst (kg per employee)**



**Chemical waste, Basel (tonnes)**



# Resources – optimising use, increasing ecoefficiency

We want to create a sustainable future for energy. It's a goal that we pursue actively.

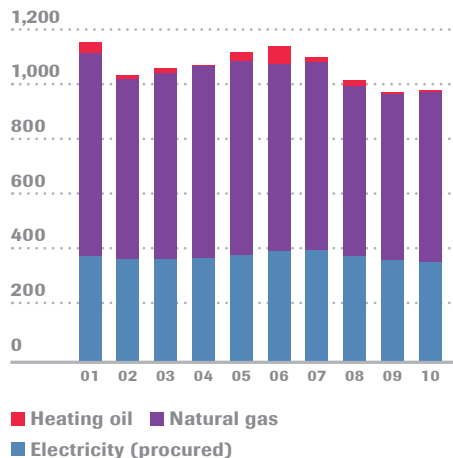
## Energy consumption

One of Roche's top priorities is to improve its ecobalance. Wherever possible, we use energy sources and technologies that have the least impact on the environment.

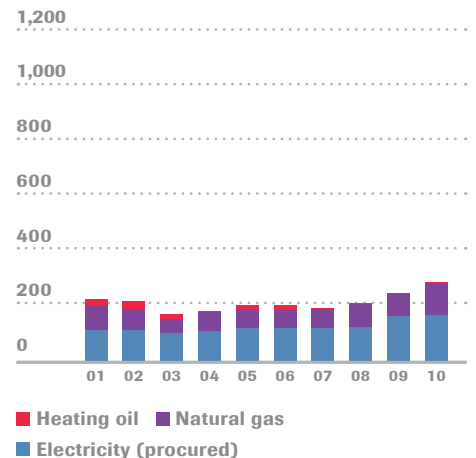
The implementation of specific energy-saving measures enabled us to stabilise our energy consumption at Basel in spite of the very cold winter and the start up of a new research and development facility. Natural gas was the most widely

used source of energy. In addition we used 978 tonnes of depleted solvents instead of fuel to generate steam in our company waste air incineration facility. Electricity consumption fell once again by 1 percent.

Energy consumption, Basel (terajoules)



Energy consumption, Kaiseraugst (terajoules)

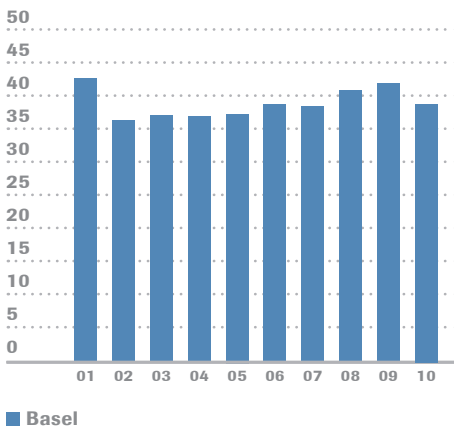




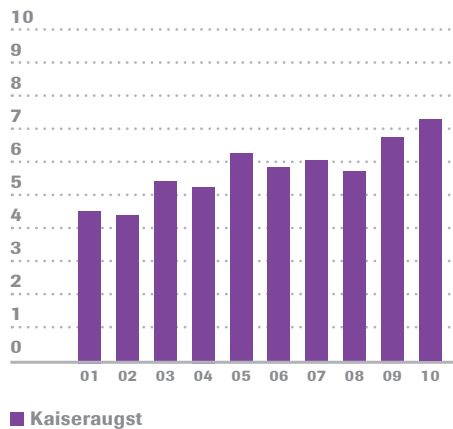
**Our employees**

All employees are personally responsible for safety, health and environmental protection. A wide range of continuous training courses is provided to ensure their knowledge is up to date.

**Operating expenses for safety, health and environmental protection (million CHF)**



**Operating expenses for safety, health and environmental protection (million CHF)**



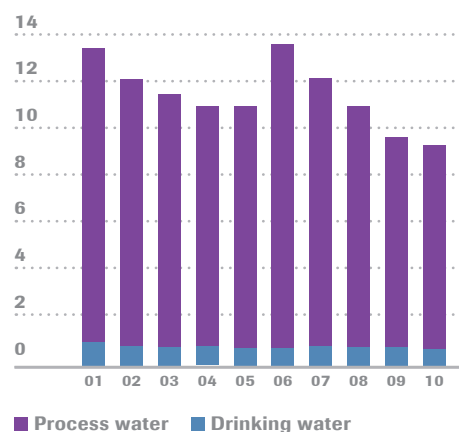
Technical, organisational and staffing measures ensure that we help to use resources sparingly.

**Water consumption**

Most of the water consumed at Roche Basel is used to cool production facilities. This water is taken primarily from

the Rhine and is returned to the river in its original state after use. Infrastructure improvements have reduced overall water consumption in recent years.

**Water consumption, Basel  
(million cubic metres)**



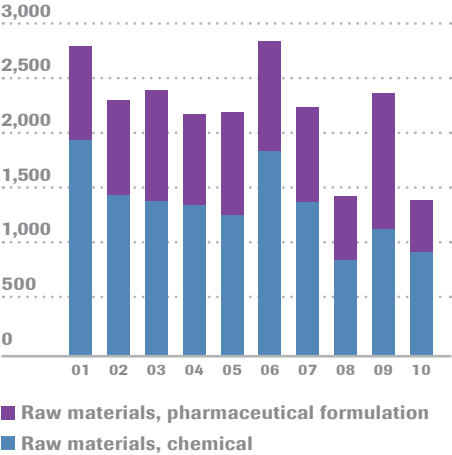


**Consumption of raw materials and solvents**

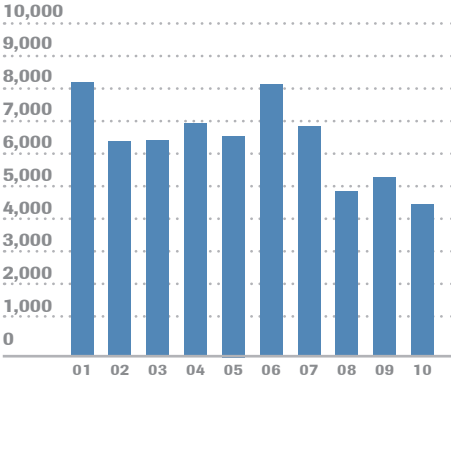
Our production programmes and volumes are changing all the time in response to the market. Consumption of raw materials and solvents varies

accordingly. As part of our commitment to sustainable development, we strive to further improve production processes and reduce raw material inputs.

**Consumption of raw materials, Basel (tonnes)**



**Consumption of solvents, Basel (tonnes)**



# Reporting principles

We want to ensure the safety and health of our employees and to protect the environment as effectively as possible.

Roche Basel is the Group's headquarters and one of Roche's biggest research, development, production and administrative sites. The Kaiseraugst facility is its biggest packaging and logistics centre.

The production portfolio changes from year to year in response to the market. For this reason a comparison of the statistics for production volumes and raw material and solvent consumption, in particular, provides only limited useful information. In 2010, for example, headcount at the site rose by a further 2 percent, and this led to a rise in various consumption parameters.

Detailed information about the graphics in this brochure can be found on the internet at: [www.roche.ch/en/sicherheit-und-umweltschutz.htm](http://www.roche.ch/en/sicherheit-und-umweltschutz.htm) (in German only).

A printed version of this report is available in German. Visit the Roche Group's website for more information about safety, health and environmental protection at Roche: [http://www.roche.com/en/corporate\\_responsibility/environment.htm](http://www.roche.com/en/corporate_responsibility/environment.htm).



Luft

Stickstoff N<sub>2</sub>

**Published by**

F. Hoffmann-La Roche Ltd

Site Communications

4070 Basel, Switzerland

© 2011

[www.roche.com](http://www.roche.com)

[www.roche.ch](http://www.roche.ch)

7 000 851