

Water Treatment

Individual solutions for your application

Aqua Technologie Nörpel

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Agenda

- About us
- Disinfection
- Water quality
- Trace impurities
- Arsenic
- Example: individually designed plant
- Summary

About us

For more than 20 years we have been working in the water management – clean, safe and sustainable

- familiar with all methods of water treatment
- development of economical procedures and plants for:
 - process water
 - drinking water
 - water conservation/recycling
 - industrial water

About us

Corporate strengths:

- consultancy
- planning
- plant engineering and construction



→ Individual solutions for all problem areas



Disinfection

- hygiene of water plays a very important role
 - not only in the the food and beverage industry
- sterile water is inevitable in all industry segments
- not sterile water leads to contamination of plants
 - higher cleaning effort
 - lack in plant availability



Disinfection

- an important topic is the disinfection without chemicals
- the consequent commitment of UV disinfection enables a stable water quality
- to secure stable water quality it necessary to consider the system as well as the infrastructure
 - disinfection is just as good as pre-cleaning
 - an important criteria of disinfection is the potential of re-infection

Water quality

- two important criteria in order to evaluate water quality:
 - health aspects (drinking water, food production etc.)
 - technological aspects (process water, e.g. steam generator, cooling water)
- main task: production of water that meets the specific needs of consumers

Water quality – outstanding challenges

- elimination of trace impurities
- increase of man-made trace impurities
- preservation of natural character

→ This challenges are eminent dealing with drinking water as well as product water in the food and beverage industry

Trace impurities

• Uranium

• Bromate

• Antimony

• Fluoride

• Arsenic

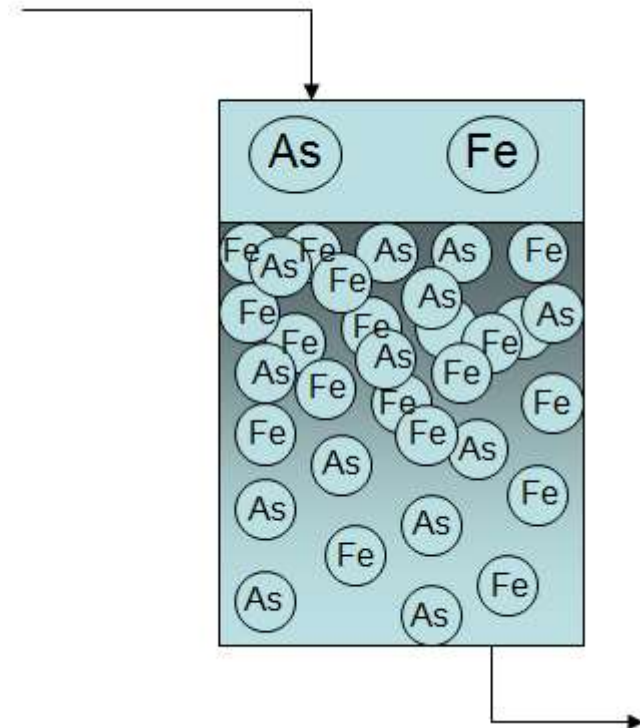
• Etc.

Trace impurities



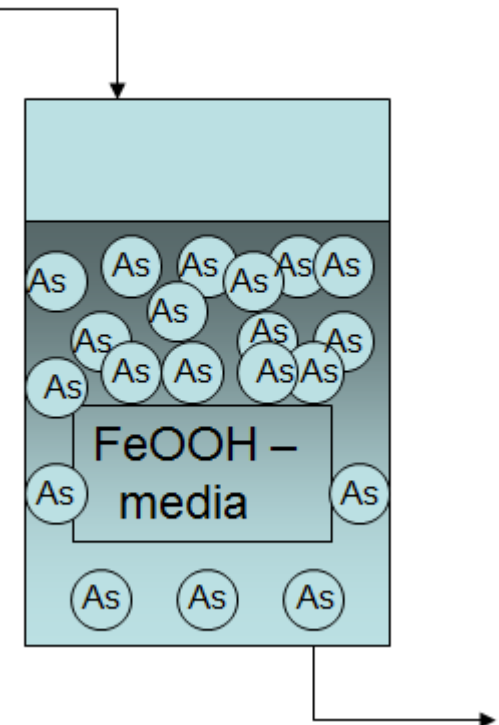
Arsenic

- arsenic in ground water is a wide spread problem
- it is harmful and carcinogenic
- concentration of arsenic decreases by filtering iron water



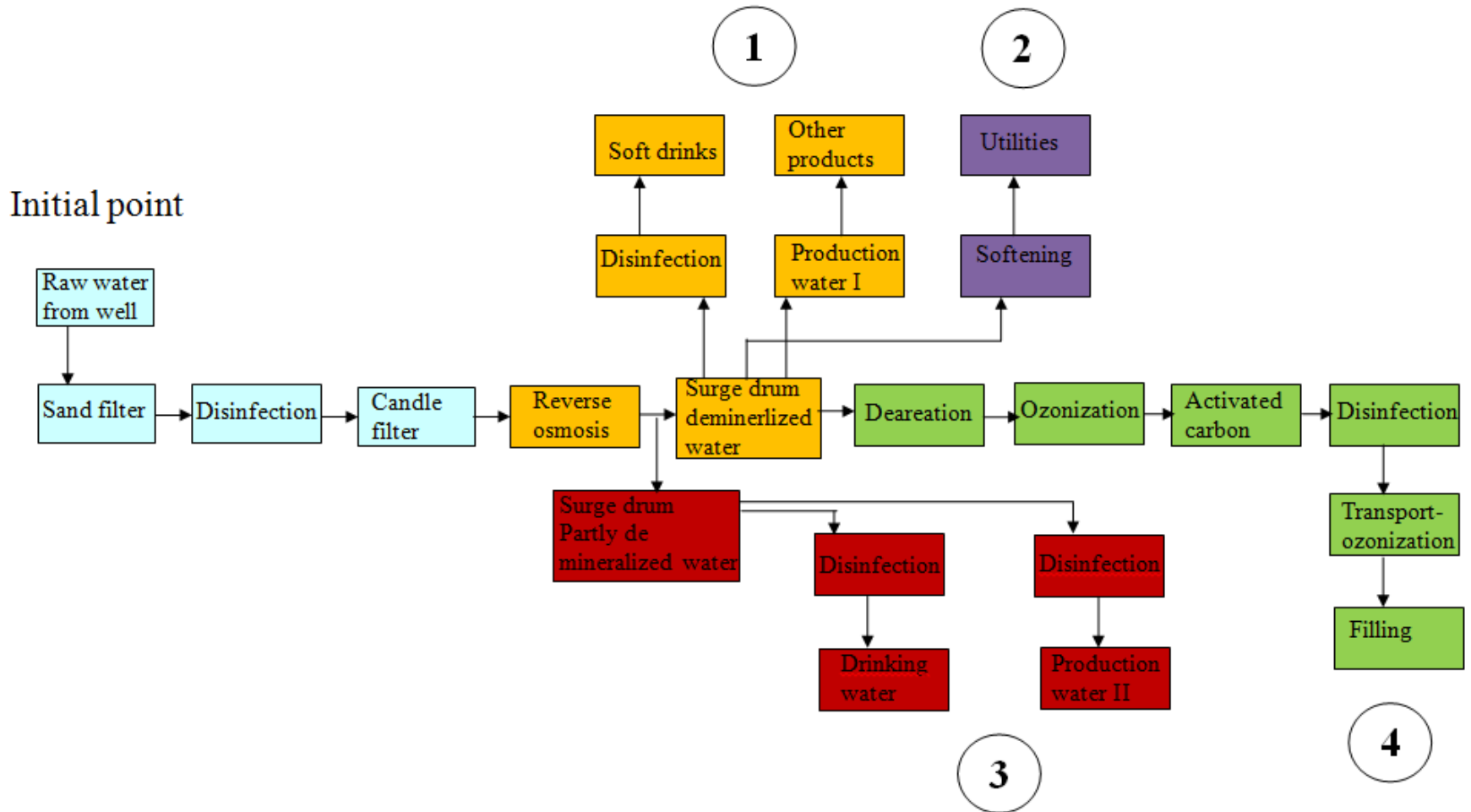
Arsenic

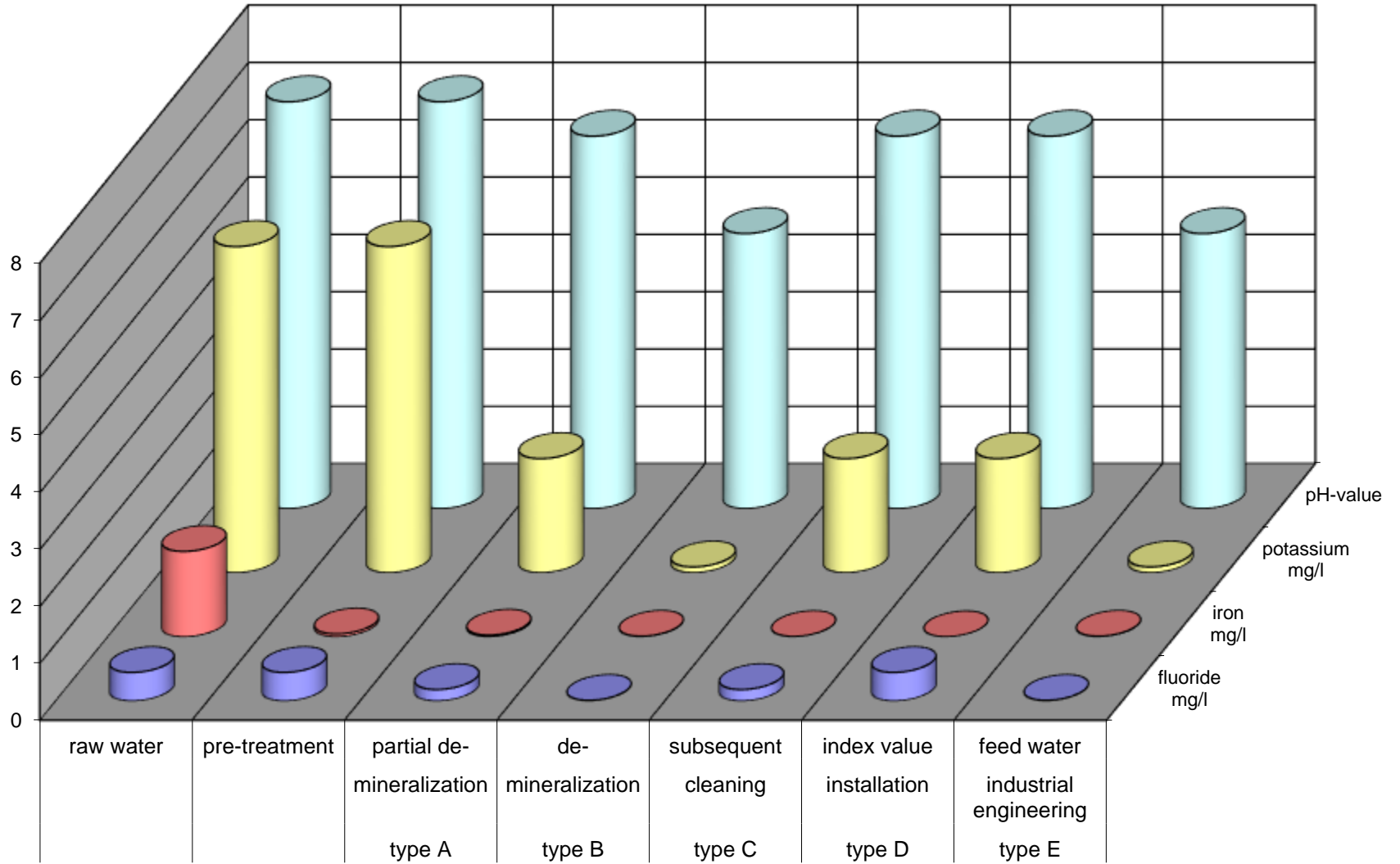
- not every water containing arsenic obtains iron
- development of a filter material on iron basis
→ capability to tie arsenic
- Current processing: development of an absorption material that is dispersed throughout whole water

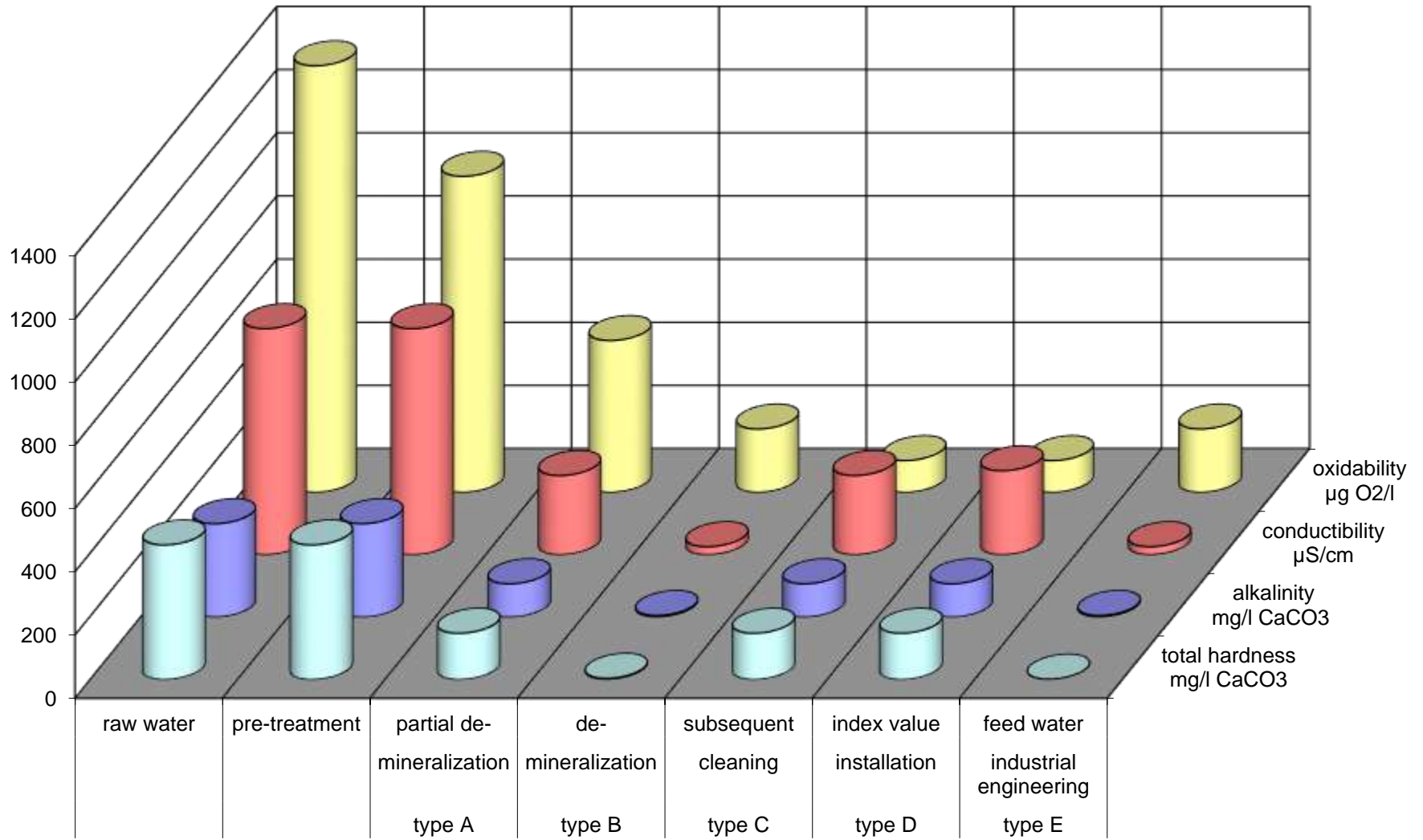


Example: individually designed plant

- Aim:
 - develop water treatment plant that allocates the ideal water quality
 - keep costs and investment as low as possible







Summary

- process engineering and technologies of water treatment are as diverse as the amount of water qualities
- there is a solution for almost every problem
- important: not only consider investment cost, but operating costs
- operating costs depend on the procedure chosen
- low operating cost = high overall rentability
- analysis of needs helps reducing costs still reaching the ideal benefits

Summary

- we try to choose procedures that harm the environment as less as possible
- our aim is to build plants that do not waste water



Thank you for your attention



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