BASU

Healthcare

Applications

of pure

Energy in water
Drinking Water

Previously used technology:
Chlorine gas

The reasons for switching to new technology:
Hazards of using this method and change of Government polices in favor of cost efficient, ecology friendly and efficient technologies.

Application:
Disinfection of municipal drinking water.

City population:
15 000

Drinking water consumption:
~ 4 320 m³ / day

Type of equipment:
300 L BASOQUELL / hour
Drinking Water

Previously used technology:
Chlorine gas

The reasons for switching to new technology:
Hazards of using this method and change of Government polices in favor of cost efficient, ecology friendly and efficient technologies.

Application:
Disinfection of municipal drinking water

City population:
50 000

Drinking water consumption:
~ 13 000 m³ / day

Type of equipment:
2000 L BASOQUELL / hour
Legionella prevention

Problem they wanted to solve: Legionella contamination

Previously use technology: high temperature heated water.

As a result of using high temperature technology the damages of the piping line were detected while Legionella contamination still persisted.

Application: Disinfection of cold and hot water of water supply system in order to prevent Legionella contamination.

Location of the installation:
300 bed hospital in Piemonte, Italy

Water consumption:
45 m3 / day of cold and hot water

Type of equipment:
1200 L BASOQUELL per hour
Drinking Water

Source water: near by artificial water reservoir

Previous technology: Dosing of liquid hypochlorite. Dosing controlled manually.

The reasons for switching to new technology: Extremely poor quality of drinking water. Continues public complains about drinking water quality. Deterioration of piping system due to growing biofilms and lime deposits.

Application: Disinfection of municipal drinking water.

Location of Installation: Russia.

City population: 4 000

Drinking water consumption: ~ 8 000 m3 / day.

Type of equipment: 2 x 10 000 L per hour. One Device for operation and the second as a redundancy / stand by capacity
Drinking Water

Previously used technology: None - new built complex.

The housing complex was built with full consideration of ecological impact.

Therefore the builder selected the technology which was considered as the most ecology-friendly.

Application:
Disinfection of water in order to prevent Legionella contamination.

After BASOQUELL dosing REDOX ~ 550 mV is maintained as indication of water purity and decontamination.

Location of installation: Sweden.

Housing complex: 4 blocks with each 4 apartments. (total 16 apartments)
BASOQUELL application on a chicken farm in Belgium

Information: 55,000 Broilers

Dosing rate: ~ 3%

For cleaning: Client dose with 20% BASOQUELL while cleaning the barns

Best Results - latest 3 circles:

Feed conversion index with BASOQUELL = 1.61 (before 1.72 - 1.75)

Saving: 110 grams feed per chicken, app. 35 - 40 grams more weight

Unit 400 with water softener

2 Barns 27,500 Broiler each
Application on a egg farm in Belgium

Information: 70,000 layers delivered 16 weeks old, leaving the barns after 78 weeks to the slaughter house. The well water is treated from the beginning with ~3 % BASOQUELL

Results: Egg production rate is app. 6 % higher then before over the complete cycle. The numbers of broken eggs and dirty eggs went down extremely, the client do not take anymore notes about the numbers since 2 years.

Egg mass is 5–6 g higher.

Using BASOQUELL mortality went down by 30%
BASOQUELL application on a chicken farm in Belgium

Installation: ~3 % dosing in Well water for 40,000 hens

Results: Mortality = 50% down

For cleaning:
Client dose with 10 % while cleaning the barns

Nearly no more medication

Unit: 900 L BASOQUELL-Unit with softener
**BASOQUELL application on a Poultry farm in Norwood, Canada**

**Results:** Birds were placed in the house. Egg size increased very quick, approx. 2 weeks earlier than previous flocks. Feed conversion (app. 6 weeks) into flock is in total 130 kg less per week.

Brown hens increased their production and percentage much earlier than previous years, while maintaining less feed consumption. White hens also increased their percentage earlier and the egg size increased much faster, also maintaining less feed consumption.

The actual flock size is 20.200 hens. The feed consumption is 134,55 tons. You’ll notice 6.8 tons less feed used with more birds housed and production is better.

The previous flock size was 19.600 hens. The feed consumption was 141,50 tons.

**Conclusion:** Our Client is certain that BASOQUELL in the drinking water protected his flock from high numbers of dead normally experienced.
BASOQUELL application on a Poultry farm in Ontario, Canada

Installation: ~3 % dosing in drinking water for 45,000 layers

Cleaning: 10% for barn cleaning
In final - use of acid and other chemicals reduced to zero

Unit: BASOQUELL 900, fully automatic, with brine tank and water softener

Results: Birds were placed in the house. Egg size has increased very quickly, approx. 2 weeks earlier than previous flocks. Feed conversion approximately 4 weeks into flock is 25 kg / ton less per week for the entire flock.

Brown hens increased their production and percentage much earlier than previous years, while maintaining less feed consumption. White hens also increased their percentage earlier and the egg size increased much faster, also maintaining less feed consumption.

DISEASE: Coccidiosis Enteritis hit 1.5 weeks into the flock. Dosage set to 4% and within 6 days Cocci was gone.
BASOQUELL application on a turkey farm in Manitoba Canada

Installation: ~3 % dosing in drinking water for 30,000 Meat turkeys

Results: Mortality total 1%, meat quality excellent

Use of acid and other chemicals reduced to zero

Unit: BASOQUELL 6000
BASU products can be used in many areas

Some applications for Layers and Broiler:

Dosing systems  
Fogging and Barn disinfection
Dairy Farm and Cheese Factory

The dairy farm has 220 milk cows, producing 7,500 litres per day. The factory produce different kind of cheese and also butter, yoghourt etc. for the farm shop in Netherlands. **Results:** No more bacteriologic problems in the factory. Health situation of animals is excellent.

**Dosing:**
Drinking water with 1.5%. Cleaning and disinfection of tools in factory with 20% BASOQUELL
Process water with 2% BASOQUELL
On the cheese farm the BASOQUELL unit is used in the milking stable. In this farm the cows are milked with a carousel system. After the milking of each individual cow the milking set is disinfected in a bath with BASOQUELL 804. Because the milking set is disinfected after each milking, the risk of cross contamination from cow to cow is reduced to a minimum. Cross contamination of for example Staphyloccus will be minimised.

**BASU products can be used in many areas**

**Cooling towers water antialgae/ antibiofilm treatment**

**Problems associated with cooling systems before treatment**

- scaling and corrosion of pipes caused by biological activity (biofilm and algae growth)
- fouling of filling material caused by algae in cooling tower
- frequent emptying of basins from sludge and bioactive material
- poor heat transfer due to biofilm formation - loss of energy / money
- usage of dangerous chemicals in case of algae growth prevention
- generally high operating and maintenance costs
- no effective on-line biological activity control
Positive effects after treatment of cooling system

- elimination of biofilm and algae formation
- increased heat transfer - lower energy loss
- increased working time of cooling system
- usage of ecologically friendly substances & savings on energy
- excellent dosing control through Redox potential control

Cooling water - for plastic moulds antibacteria / antialgae / antibiofilm treatment (Finland)

Cooling towers - water antialgae/ antibiofilm treatment

Effluent treatment - The industry is facing the problem of treating highly contaminated effluents in water. The huge oxidising, neutralising and flocculation properties of BASU solutions offer an effective way to treat these difficult effluents and to reduce dissolved harmful substances to a minimal level, not comparable to any existing alternative.

Treatment of cooling water - at a plastic factory (Belgium)
Before milking udder disinfecting with BASOQUELL®

It is advised, to warm up BASOQUELL® and to use it like a spray.

Disinfecting of the external sex organs with BASOQUELL® before taking out sperm and insemination.

If your region is subject to frequent outbreaks of foot-and-mouth disease, it is advised to continue procedures even after epidemic is over.

**Well-known facts about foot-and-mouth disease:**

- very resistant to ether, chloroform, etc.
- maximum resistance under PH 7 to 7,5
- stability under ambient temperature in the range from -70°C to +99°C
- the present disinfecting solutions to fight foot-and-mouth disease are 3% of NaOH and/or 1% of formaldehyde
- the "gates" for penetration of foot-and-mouth disease virus are mucous membranes and hairless skin sections
- recovered livestock still can remain the source of the foot-and-mouth disease virus for 8 to 24 months
With BASOQUELL® all stages in the breeding are secure and reliable. BASOQUELL® - the inevitable product for fish and shrimp farming.

The treatment of feed with BASOQUELL® offers several benefits. It improves the preservation, promotes growth, increases productivity, reduces mortality and improves quality.

Virus diseases are the biggest obstacle in the rearing. Daily disinfection of feed and pond water with BASOQUELL® as well as fresh water is the most effective way to prevent disease.

We supply, install and maintain water treatment systems from 10m³ - 14 million liter drinking water within 12 hours. We can produce anywhere, where one gets electricity, water and salt.

We are able to produce a good quality of drinking water in any area and we reach easily the required international standards (WHO).
Please feel free to contact us or one of our distributors for further information.

Our contribution
for the next generation - germ-free water, less antibiotics and "naturally" - against fungi, germs, viruses and bacteria.

Our goal
is to share achievements rather than leaving errors.

Opt for a reliable partner
in all vital areas

BASU
www.basu.at