

38.- Novopure, biodegradable and sustainable water treatment chemicals as antiscalants

Title and name of product or technology
NovoPure, biodegradable and sustainable water treatment chemicals
Abstract
As a result of a long term research project Holland Novochem developed the “NovoPure-technology”, an environmental friendly product line of water treatment chemicals. NovoPure products are based on sustainable biopolymers and contain exclusive biodegradable components. The product line comprises corrosion-inhibitors, antiscalants and dispersing agents for process and cooling water systems. For sterilization and pasteurization systems specific corrosion-inhibitors are available which protect packaging as well as the process system. For membrane systems there is a range of antiscalants and development is still being made in a new research program.
Description including main features/advantages
<p>To prevent corrosion of metal equipment and packaging (food industry) in process- and cooling water systems, small amounts of chemicals -corrosion inhibitors- are being dosed. Traditional corrosion inhibitors are based on poorly or non biodegradable raw materials, like polyacrylates and phosphonic acids. Also ecotoxic high levels of phosphate, zinc or even molybdate are being used. These components burden the aquatic environment by discharge of the water.</p> <p>To prevent deposition of organic or inorganic (e.g. lime) material in all kind of water systems, small amounts of chemicals -antiscalants or dispersing agents- are being dosed. Like corrosion inhibitors these chemicals are being based on poorly biodegradable polymers and phosphonic acids</p> <p>With NovoPure corrosion inhibitors, antiscalants and dispersing agents, the environmental burden is substantial being reduced compared to traditional water treatment chemicals. Due to biodegradability and low phosphorus content NovoPure meets today’s most severe criteria with respect to both environment and legislation. Based on biopolymers from renewable sources, the technology can be characterized as sustainable.</p> <p>Other advantage of NovoPure is that it improves the biocide operation and no separate biocides are needed.</p>
Innovative aspects
NovoPure chemicals are based on biopolymers from renewable sources. All components are biodegradable and the content of phosphorus and nitrogen is (very) low.
Current and potential industrial users/domains of application
<p>Current users are cooling water systems in different kind of industries, process water in the paper industry, membrane systems and sterilization or pasteurization systems in the food industry.</p> <p>Potential application area is the chemical industry, power stations and desalination plants.</p>
Current state of development
Main development at this moment is being made in the yield of membrane systems.

Contact details	
Organisation	Holland Novochem BV
Website	www.hollandnovochem.com
Contact person	Mrs. Irma Steemers-Rijkse
Address	Villawal 15, 3432 NX Nieuwegein P.O. Box 390, 3430 AJ Nieuwegein The Netherlands
Phone	+31 (0)30 602 15 33 or +31 (0)6 204 356 95
Fax	+31 (0)30 605 33 76
Email	i.steemers@hollandnovochem.com