Nº. 106

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BIBLIOGRAFIA

Tema: Acido Peracetico- preparación y aplicación en máquinas de ordeño.

Fecha: 30.8.99

122:114477

Disinfection of a polymicrobial biofilm: comparison of the efficiency of chlorine, formaldehyde, peracetic acid, hydrogen peroxide and a hydrogen peroxide/peracetic acid combination.

Alasri, Anouar; Moal, Jean Francois; Roques, Christine; Michel, Georges; Cabassud, Corinne; Aptel, Philippe (Lab. Bacteriol., Virologie Microbiol. Industrielle, Fac. Sci. Pharm., Toulouse, Fr.).

Sci. Tech. Eau, 25(4), 461-7 (French) 1992. CODEN: STEADG. ISSN: 0823-0269.
DOCUMENT TYPE: Journal CA Section: 61 (Water)

Keywords

biofouling control water purifn distribution

Index Entries

Water purification
biofouling control, disinfection of polymicrobial biofilm in water purifn. and distribution systems

50-00-0, biological studies
79-21-0
7722-84-1, biological studies
7782-50-5, biological studies
disinfection of polymicrobial biofilm in water purifn. and distribution systems

124:346620

Manufacturing aqueous compositions containing peracids.

Bianchetti, Giulia Ottavia; Scialla, Stefano; Campestrini, Sandro; Di Furia, Fulvio (Procter and Gamble Company, USA). Eur. Pat. Appl. EP 700902 A1 13 Mar 1996, 13 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE. (European Patent Organization). CODEN: EPXXDW. CLASS: ICM: C07C409-24. ICS: C07C409-26; C07C409-30; C07C407-00. APPLICATION: EP 94-202608 10 Sep 1994. DOCUMENT TYPE: Patent CA Section: 46 (Surface Active Agents and Detergents)

Keywords

peracid aq compn manuf
anhydride hydrogen peroxide reaction
detergent aq peracid contg

Index Entries

Anhydrides
    manufg. aq. compns. contg. peracids by reaction of anhydrides with concd. hydrogen peroxide solns.

Detergents
    cleaning compns., manufg. aq. compns. contg. peracids by reaction of anhydrides with concd. hydrogen peroxide solns.

Carboxylic acids, preparation
    peroxy, manufg. aq. compns. contg. peracids by reaction of anhydrides with concd. hydrogen peroxide solns.

79-21-0
28317-46-6
108-24-7
108-30-5, reactions
108-55-4
626-29-9
638-08-4
2035-75-8
4196-95-6
7722-84-1, reactions
10521-07-0
    manufg. aq. compns. contg. peracids by reaction of anhydrides with concd. hydrogen peroxide solns.

125:326842
Bacteriophage inactivation and starter-inhibiting properties of a **peracetic acid** disinfectant.
Langeveld, Leo P. M.; Van Montfort-Quasig, Renate M. G. E. (Netherlands Inst. Dairy Res., NIZO, Ede NL-6710, Neth.).
J. Dairy Res., 63(4), 649-654 (English) 1996. CODEN: JDRSAN. ISSN: 0022-0299. DOCUMENT TYPE: Journal CA Section: 17 (Food and Feed Chemistry) Section cross-reference(s): 10

Keywords

peracetic acid disinfectant dairy starter **bacteriophage**

Index Entries

Dairy industry
Lactobacillus bulgaricus
Streptococcus thermophilus
Virucides and Virustats
Virus, bacterial
  bacteriophage inactivation and dairy starter-inhibiting properties of **peracetic acid** disinfectant
Cheese
  starter; **bacteriophage** inactivation and dairy starter-inhibiting properties of **peracetic acid** disinfectant
Milk preparations
  yogurt, starter; **bacteriophage** inactivation and dairy starter-inhibiting properties of **peracetic acid** disinfectant
79-21-0
  bacteriophage inactivation and dairy starter-inhibiting properties of **peracetic acid** disinfectant

116:3481
Peracetic acid as disinfectant in dairies.
Guthy, Klaus; Boehner, Beate (Tech. Univ. Muenchen-Weihenstephan, Freising W-8050, Germany). Lebensmittelind. Milchwirtsch., 112(37), 1118-19, 1122, 1124-5 (German) 1991. CODEN: LEMIEZ. DOCUMENT TYPE: Journal CA Section: 10 (Microbial, Algal, and Fungal Biochemistry) Section cross-reference(s): 17

Keywords

peracetic acid milking machine disinfection

Index Entries

Milking machines
    disinfection of, peracetic acid suitability for
Sterilization and Disinfection
    of milking machines, peracetic acid suitability for
79-21-0
    milking machine disinfection with

121:12315
Peroxygen cleaning composition for brewing and **dairy** industries.
Revell, Christopher; Brougham, Paul (Laporte ESD Ltd., UK). PCT Int. Appl. WO 9323517 A1 25 Nov 1993, 15 pp. DESIGNATED STATES: W: NO, US; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (World Intellectual Property Organization). CODEN: PIXXD2. CLASS: ICM: C11D003-39. ICS: C11D007-08. APPLICATION: WO 93-GB995 14 May 1993. PRIORITY: GB 92-10526 16 May 1992. DOCUMENT TYPE: Patent CA Section: 46 (Surface Active Agents and Detergents)

Keywords

peroxide phosphoric sulfamic cleaner disinfectant
peracetic acid cleaner brewery **dairy**
hydrogen peroxide cleaner brewery **dairy**
dairy cleaner peroxide phosphoric sulfamic
brewery cleaner peroxide phosphoric sulfamic

Index Entries

Dairy industry
    cleaner-**disinfectants** for, acid- and peroxide-contg.
Brewing
    industry, cleaner-**disinfectants** for, acid- and peroxide-contg.
Bleaching agents
    peroxygen, cleaners contg. acids and, for brewery and **dairy**
Detergents
    cleaning compns., disinfecting, acid- and peroxide-contg., for brewery and **dairy**
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7722-84-1, uses
    cleaners contg. acids and, for brewery and **dairy**
5329-14-6
7664-38-2, uses
    cleaners contg. peroxides and, for brewery and **dairy**

J Food Prot 1999 Aug;62(8):894-8

Inactivation of Lactobacillus helveticus bacteriophages by thermal and chemical treatments.

Quiberoni A, Suarez VB, Reinheimer JA

Programa de Lactologia Industrial, Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina.

The effect of several biocides and thermal treatments on the viability of four Lactobacillus helveticus phages was investigated.
Times to achieve 99% inactivation of phages at 63 degrees C and 72 degrees C in three suspension media were calculated. The three suspension media were tris magnesium gelatin buffer (10 mM Tris-HCl, 10 mM MgSO4, and 0.1% wt/vol gelatin), reconstituted skim milk sterile reconstituted commercial nonfat dry skim milk, and Man Rogosa Sharpe broth. The thermal resistance depended on the phage considered, but a treatment of 5 min at 90 degrees C produced a total inactivation of high titer suspensions of all phages studied. The results obtained for the three tested media did not allow us to establish a clear difference among them, since some phages were more heat resistant in Man Rogosa Sharpe broth and others in tris magnesium gelatin buffer. From the investigation on biocides, we established that sodium hypochlorite at a concentration of 100 ppm was very effective in inactivating phages. The suitability of ethanol 75%, commonly used to disinfect utensils and laboratory equipment, was confirmed. Isopropanol turned out to be, in general, less effective than ethanol at the assayed concentrations. In contrast, peracetic acid (0.15%) was found to be an effective biocide for the complete inactivation of all phages studied after 5 min of exposure. The results allowed us to establish a basis for adopting the most effective thermal and chemical treatments for inactivating phages in dairy plant and laboratory environments.

J Food Prot 1999 Jul;62(7):761-5

Inactivation of Listeria monocytogenes/Pseudomonas biofilms by peracid sanitizers.

Fatemi P, Frank JF

Department of Food Science and Technology, University of Georgia, Athens 30602-2106, USA.

The ability of peracetic acid and peroctanoic acid sanitizers to inactivate mixed-culture biofilms of a Pseudomonas sp. and Listeria monocytogenes on stainless steel was investigated. Types of biofilms tested included a 4-h attachment of the mixed-cell

suspension and a 48-h biofilm of mixed culture formed in skim milk or tryptic soy broth. Biofilm-containing coupons were immersed in solutions of hypochlorite, peracetic acid, and peroctanoic acid either with or without organic challenge. Organic challenge consisted of either coating the biofilms with milk that were then allowed to dry, or adding milk to the sanitizing solution to achieve a 5% concentration. Surviving cells were enumerated by pouring differential agar directly on the treated surfaces. The peracid sanitizers were more effective than chlorine for inactivating biofilm in the presence of organic challenge. The 48-h mixed-culture biofilm grown in milk was reduced to less than 3 CFU/cm2 by 160 ppm of peracid sanitizer after 1 min of exposure. Peroctanoic acid was more effective than peracetic acid against biofilm cells under conditions of organic challenge. Pseudomonas and L. monocytogenes were inactivated to similar levels by the sanitizer treatments, even though Pseudomonas predominated in the initial biofilm population.

Vet Res 1997 Jul-Aug;28(4):353-63

Resistance of Escherichia coli growing as biofilms to disinfectants.

Ntsama-Essomba C, Bouttier S, Ramaldes M, Dubois-Brissonnet F, Fourniat J

Laboratoire de microbiologie industrielle, faculte de pharmacie, Chatenay-Malabry, France.

The bactericidal activity of various disinfectants (cationic or amphoteric surfactants, oxidizing agents, phenolic derivatives) was determined against Escherichia coli CIP 54127 obtained by culture on tryptic soy agar (in-suspension or on-germ-carrier test) or in the form of biofilms produced in a continuous culture system. The bacteria tested on germ-carriers or included in biofilms were more resistant than the same strain in suspension. The extent of the reduction in activity depended on the nature of the disinfectant. In the two cases, the greatest reduction was observed with benzalkonium chloride and hexadecyl trimethylammonium bromide, the agents with the lowest hydrophile-lipophile balance. The activity of the oxidizing agents (sodium hypochlorite, peracetic acid/H2O2) and alkyl trimethylammonium derivatives (C12 and C14) was somewhat reduced, while that of the phenolic derivatives (o-cresol, phenol) was either slightly attenuated or unaffected. The reduction in sensitivity was attributed to a reduced accessibility of the bacterial cells to the disinfectants, due to the fact that the former adhered to a support. Furthermore, the interfering action of the substances in contact with the bacteria (milk in the germ-carrier test and exopolymers in the biofilms) could play a role. The reduced sensitivity of the bacteria in the biofilms was not due to any alteration in the metabolic state of the bacteria (mostly in a quiescent state) since this resistance was lost after the mechanical resuspension of the cells before the contact with the disinfectants.

Pharmazie 1967 Aug;22(8):444-5

[On the antimicrobial effect of peracetic acid. 1. Preparation, analysis and properties of peracetic acid].

[Article in German]

Mucke H, Sprossig M

7293. Peracetic Acid.

Ethaneperoxoic acid; peroxyacetic acid; acetyl hydroperoxide. $C_2H_4O_3$; mol wt 76.05. C 31.59%, H 5.30%, O 63.11%. CH_3COOOH. Prepd from acetaldehyde and oxygen in the presence of cobalt acetate: **Ger.** pats. **269,937; 272,738** (1914); *Frdl.* **11,** 73; by the auto-oxidation of acetaldehyde: Wallace; Golding, **U.S.** pats. **2,833,813-4** (1958 to du Pont). A 50% soln may be obtained from acetic anhydride, hydrogen peroxide, and sulfuric acid: D'Ans, Frey, *Ber.* **45,** 1848 (1912); Erlenmeyer, *Helv. Chim. Acta* **8,** 795 (1925).

Liquid, acrid odor. Explodes violently on heating to 110°. Freely sol in water, alcohol, ether, H_2SO_4. Stable in dil aq soln. Strong oxidizing agent.

Caution: Strongly irritating to skin and eyes.

Peracetic Acid

--Peracetic acid sterilization also uses hydrogen peroxide, in this case, as a component of an equilibrium mixture also containing acetic acid and water. Peracetic acid is acetic acid with an extra oxygen atom, a reactive substance that interacts with most cellular components to cause cell death. Oxidizing agents such as peracetic acid are very corrosive to instruments. The STERIS brand of sterilizer combines anticorrosive chemicals with peracetic acid to eliminate this corrosivity (STERIS Corporation 1988). Peracetic acid sterilization is rapid, but since it is a liquid sterilant, only immersible instruments are suitable. Maintenance of sterile conditions after the completion of the sterilization process is a problem common to all liquid sterilants and precludes storage of sterile items for extended periods. The effectiveness of peracetic acid may be inhibited in the presence of a heavy bioburden (a characteristic common to other sterilization alternatives), and thus its use must be preceded by a thorough cleaning of the device. **Testing by the manufacturer has shown no significant inhibition of peracetic acid's effectiveness in the presence of five percent serum and hard water.** Prolonged exposure of a variety of polymer and rubber materials to STERIS peracetic acid has shown no surface oxidation or degradation (Ibid.).

--A vapor phase peracetic acid sterilizer has recently been developed and has eliminated the immersion requirements. The sterilization process can take three to eight hours depending on the type of device. No special wrapping or sterilization containers are needed (Jane Osoko, Ingram and Bell, pers. com. 21 June 1994).

http://www.mmip.mcgill.ca/heart/carecharster.html