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Expanded Record (Item 1 of 1 from Meeting Abstracts)

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Chlorine dioxide sterilization of red blood cells for transfusion, additional studies.

Rubinstein A, Chanh T, Rubinstein DB; International Conference on AIDS.

Int Conf AIDS. 1994 Aug 7-12;10:235 (abstract no. PB0953).

U.S.C. School of Medicine, Los Angeles.

The use of sodium chlorite + lactic acid to form the oxidizing agent chloride dioxide (ClO₂) and chlorous acid has been used as a laboratory sterilant for decades using a stock solution (Alcide LD) (15% lactic acid and approximately 2.8% sodium chlorite) at dilutions of 1:100 and 1:150 using 5% dextrose as diluent and have exposed aliquots of washed RBC's spiked with HIV-1 for approximately 5 minutes to the sterilant; no detectible HIV-1 was assayed at 1:100; at 1:150 there was significant but incomplete inactivation. The RBC reducing enzyme system of cytochrome b5 and other systems can convert the oxidized Hb (methemoglobin) back to Hb. Current experiments using shorter exposure times and different dilutions are planned.

Publication Types:

- Meeting Abstracts

Keywords:

- Chlorides
- Chlorine
- Chlorine Compounds
- Disinfectants
- Erythrocyte Count
- Humans
- Oxidation-Reduction
- Oxides
- Sterilization
- chlorine dioxide
- chlorite
- chlorous acid

Other ID:

- 94371589
- ICA10/94371589

General Notes:

- Meeting held in: Japan

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