Stability and Activity of 3R PUROGENE in Drinking Water

Test 1: Stability of Purogene in Water

Purogene was activated according to label directions. Purified well water was used. Purogene remained in the water for four weeks without degradation, as shown in Figure A. Each week the biocidal activity of the Purogene was determined with a 1-hour challenge of 1000 cells/ml of *Salmonella choleraesuis* and 1000 cells/ml of *Escherichia coli*. The Purogene-treated water continued to control bacteria for the full 4 weeks as shown in Figure B.

Figure A: Residual Purogene in Water (ppm)

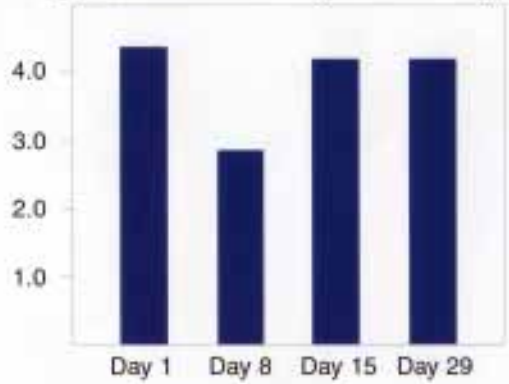
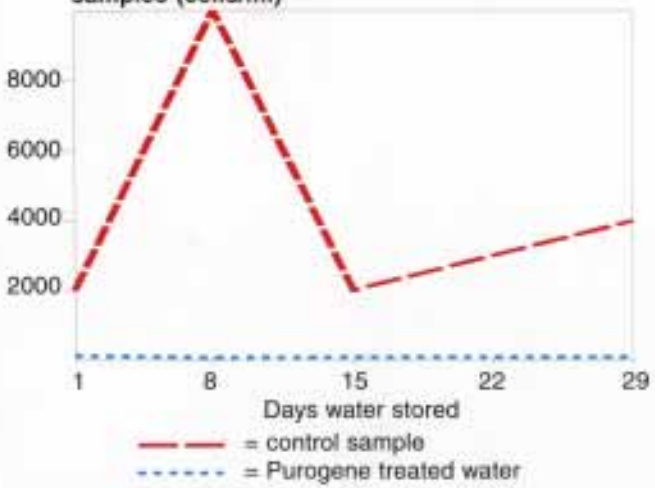


Figure B: Bacteria present after 1 hour in water samples (cells/ml)



Test 2: Direct Challenge of Stored Water with Bacteria

Purogene was activated according to label directions. Purified well water was used. Approximately 100 cells/ml each of S. choleraesuis and E. coli were added directly to stored water on a weekly basis. 24 hours later the level of bacteria in the water was measured. The level of Purogene in the water remained fairly constant, as shown in Figure C. Purogene continued to control bacteria after 4 weeks, as shown in Figure D.

Figure C: Residual Purogene in Water (ppm)

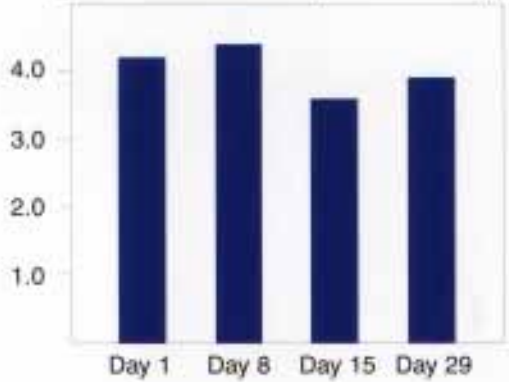
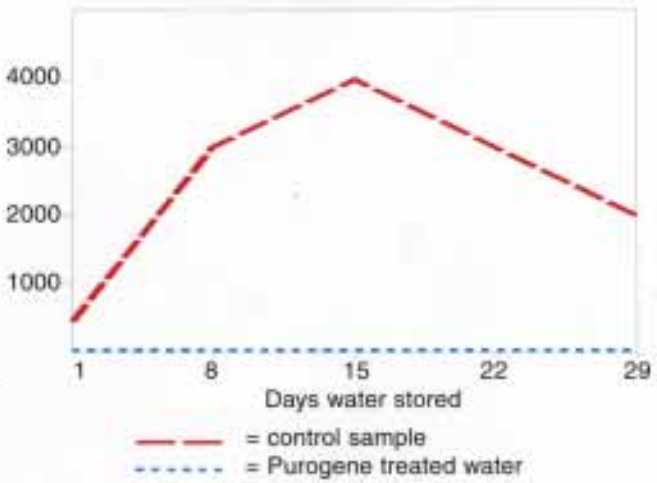


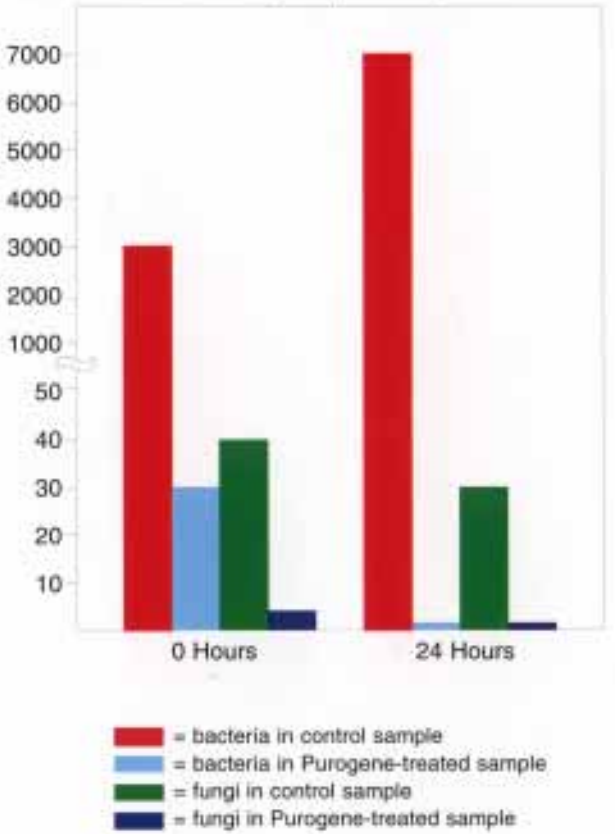
Figure D: Bacteria present after 24 hours in water samples (cells/ml)



Test 3: Direct Challenge of Stored Water with Bacteria

Purogene was activated according to label directions. Water containin a natural population of microorganisms, including bacteria and fungi, was obtained from a rainwater cistern. One sample was treated with Purogene, the other left alone. Levels of bacteria and fungi were determined just after addition of Purogene and again after 24 hours. Purogene immediately eliminated most of the microorganisms, and killed even more within 24 hours, as shown by Figure E.

Figure E: Bacteria and fungi present after 0 and 24 hours in water samples (cells/ml)



©1999 3R Marketing, Associates, P.O. Box 414, Santa Ana, CA 92702 • (714) 542-7116 • (800) 773-7116