

# Merquat™ 3940 Polymer

## Microbiological Summary

Merquat™ 3940 polymer has been tested for Preservative Efficacy (Challenge Testing) using a mixed bacterial inoculum and a mixed fungal inoculum. The method used was based on the CTFA Guideline for testing preservative efficacy. The sample passed the CTFA mixed inoculum test for preservative effectiveness. Results indicate that Merquat 3940 polymer is adequately preserved for storage.

The organisms used in the preservative efficacy testing were the following:

1. Staphylococcus aureus ATCC 6538
2. Escherichia coli ATCC 8739
3. Pseudomonas aeruginosa ATCC 9027
4. Candida albicans ATCC 10231
5. Aspergillus niger ATCC 16404

### Results:

#### Plate Count cfu/g at Indicated Time Following Microbial Inoculations:

Inoculum	Initial inoculum level	Day 0	Day 2	Day 7	Day 14	Day 21	Day 28
Bacteria mix	1.1 x10 <sup>6</sup>	7 x10 <sup>4</sup>	<10	<10	<10	<10	<10
Yeast and mold mix	7.7 x 10 <sup>5</sup>	3.1 x10 <sup>5</sup>	<10	<10	<10	<10	<10

**Conclusion:** Merquat 3940 polymer is adequately preserved for storage.

Merquat 3940 polymer, when used in a formulated system, does not promote or prevent microbial growth. We recommend normal microbial testing of your finished product.

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