UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES
Antimicrobials Division

June 4, 2004

SUBJECT: **PRODUCT CHEMISTRY REVIEW OF:**
XY-12 Liquid Sanitizer

DP Barcode: D302776 **Reg. No. Or File Symbol: 1677-52**
TGAI\MUP || OR **End-use Product [X]**

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6/7/04

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Product Formulation for XY-12 Liquid Sanitizer from label

Active Ingredient(s)	**% by wt.**
Sodium hypochlorite	8.4 %

BACKGROUND:

The registrant has submitted a product chemistry package in support of the registration of an end-use product to update the product chemistry data on file with the Agency. The studies have been submitted to and identified by the Agency as MRID's 462255-01 and 462255-02.

FINDINGS:

1. All ingredients in the formulation are cleared for use in pesticides.

2. The descriptions of the starting materials and the manufacturing\production\formulation process are **acceptable**.

3. The discussion of the formation of impurities is **acceptable**.

4. The preliminary analysis is **acceptable**.

5. The certified limits are **acceptable**. However, the registrant must clarify for which formulation the certified limits are applicable. It appears that one set of limits are for alternate 1 and one set are for alternate 2.

6. The analytical enforcement method is **acceptable**.

7. The color, physical state, and odor of the product are **acceptable**. The product is a clear light yellow liquid with a chlorine odor.

8. The relative density is **acceptable**. The mean relative density was determined to be 1.15 using A&P9600201.

9. The pH is **acceptable**. The mean pH of the product is 12.74 as determined by A&P9403001.

10. The oxidation/reduction potential is **acceptable**. Although it is not addressed in the submission, the label states that the active is a strong oxidizing agent.

11. The flammability is **acceptable** as the product does not contain any flammable components.

12. The explodability is **acceptable** as the product does not contain any explosive components.

13. The joint study on storage stability and corrosion characteristics is **acceptable**. The study was conducted for ten weeks at 20 to 22 °C in a HDPE bottle with polypropylene vented cap and porous polyethylene liner. The percentage of the active ingredient was examined at time 0, 4 weeks, 6 weeks, 7 weeks, 8 weeks, 9 weeks, and 10 weeks. The mean percentage of active ingredient decreased from 10.1% to 8.25%. At the times that the bottles were examined for activity, the containers were examined

for corrosion. In each of the examinations, no change was observed in the container or the product. The product was a light yellow liquid with a chlorine odor throughout the study. There was no cracking, crazing, pitting, or discoloration of the white plastic container. The storage of the product requires an expiration date of three months from the date of manufacture.

14. The viscosity is **acceptable** as the mean viscosity is 25.2 centipoise as determined by a Brookfield viscometer using A&P9600700.

15. The miscibility of the product is **acceptable** because it is inapplicable to the product.

16. The dielectric breakdown voltage is **acceptable**. Although it is not addressed in the submission, [redacted] The label also does not list instructions for handling the product near electrical equipment.

17. The registrant must declare the percentage of available chlorine on the label as 8%.

RECOMMENDATIONS:

1. Product Science Branch of Antimicrobials Division finds this submission in support of the registration of 1677-52 to be acceptable with comment. The registrant must amend the present study to clarify which certified limits for [redacted] correct formulation. The company must put on the label an expiration date of 3 months from the date of manufacture and declare the percentage of available chlorine as 8%.

Inert ingredient information may be entitled to confidential treatment