

**TECHNICAL REPORT**

**Report # 23225**

**Thames & Kosmos, LLC  
77 Long Wharf  
Newport, RI 02840**

**October 13, 2003**



**Requested by:** Ted McGuire  
**Authorization Received:** September 2, 2003  
**Sample Name:** Chemistry Experiment Set  
**Model/Style #:** CHEM C1000 #: 644017  
**Sample Received:** September 2, 2003  
**Number of Samples:** 1  
**Condition Received:** Good  
**Testing Completed:** October 10, 2003

**SUMMARY:**

**Toxicological Risk Assessment:**

16 CFR 1500.83 (a) (23)

**RESULTS**

See page 2 for detailed findings.

**Reviewed by:**

Albert J. Rapella  
Supervisor, Technical Services

Jeffrey D. Lipko  
Technical Director, Hardlines

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**PRODUCT REVIEW WITH TOXICOLOGICAL RISK ASSESSMENT**

**Sample ID: Chemistry Experiment Set - CHEM C1000 #: 644017**

**Procedure:**

As per client request, product was evaluated for conformance with the Consumer Product Safety Commission's (CPSC's) Exemptions for Small Packages, Minor Hazards and Special Circumstances (16 CFR 1500.83 (a) (23).

**Background:**

A single consumer product consists of a chemistry set that is to be sold in the U.S. The printing on the box for this product has not been finalized. This chemistry set contains 10 milliliters of a phenolphthalein solution, 7.8 grams hexamethylenetriamine, 10 grams ammonium chloride, 5 grams ammonium iron (III) sulfate, 8.5 grams calcium hydroxide, 3.5 grams copper (II) sulfate, 4 grams potassium hexacyanoferrate (II), 12 grams Sodium carbonate and 25 grams sodium hydrogen sulfate.

This CPSC regulation states that Chemistry sets intended for juveniles are exempt from the requirements of section 2 (p) 1 of the act if "the immediate container of each chemical that is hazardous as defined in the act and regulations there under bears on its main panel the name of such chemical, the appropriate signal word for that chemical, and the additional statement "Read back panel before using" (or "Read side panel before using" if appropriate) and bears on the back (or side) panel of the immediate container the remainder of the appropriate cautionary statement for the specific chemical in the container; "The experiment manual...accompanying such set bears on the front page thereof, as a preface to any written matter in it (or on the cover, if any be there), the following caution statement within the borders of a rectangle and in the type size specified in Section 1500.121:

**WARNING:** -- This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision and (iii) the outer carton of such set bears on the main display panel within the borders of a rectangle, and in the type size specified in Section 1500.121, the caution statement specified in paragraph (a) (23) (ii) of this section."

**Evaluation and Conclusion:**

Each of the labels for the chemicals in this product contains the name of the chemical in the packet, warning statement, a warning symbol and the name and address of the manufacturer. The Experimental Manual for this product contains both a signal word ("WARNING or CAUTION"), and any statement directing the user to read other parts of the back or side panel. It is our understanding that the panels of the box containing this chemistry set will satisfy all the requirement of 16 CFR 1500.83 (23).

Provided the final labeling conforms to the CPSC regulations, it is our opinion that the information on the various labels for the individual chemical in this product, the manual and the outer carton will all satisfy the requirements of the CPSC regulations for exempting small packages, minor hazards and special circumstances (16 CFR 1500.83).

