FILE NAME: Talc (TALC)

DATE: 2005 Nov 29

DOC#: TALC056

DOCUMENT DESCRIPTION: Unpublished Report - Analysis of Vintage Cosmetics for Asbestos

Report of Results: MVA6160

Analysis of Vintage Cosmetics
for Asbestos

Prepared for:

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29 November 2005

MVA SCIENTIFIC CONSULTANTS

Report of Results -- MVA Project No. 6160

Analysis of Vintage Cosmetics for Asbestos

INTRODUCTION

This report includes the results of analyses of fifteen (15) vintage cosmetic products delivered to MVA Scientific Consultants on 21 March 2005 from the Law Offices of Bernie Bernheim. At MVA Scientific Consultants, the samples were assigned identifying codes ranging from Q0375 to Q0378 (alphabetical suffixes were added as needed to distinguish the individual items in the make-up kits). It was requested that the materials be tested for asbestos content. Analyses were conducted during the period 22 March through 31 March 2004.

METHODS AND EQUIPMENT

The samples were first examined by stereomicroscopy utilizing an Olympus SZ-40 stereomicroscope having a magnification range from 7X to 40X. Portions of each sample were mounted on a microscope slide in the appropriate cargille liquid and analyzed by polarized light microscopy (PLM) using an Olympus BH-2 polarized light microscope having a magnification range from 40X to 1000X. The PLM analysis followed the analytical procedures recommended by the U.S. Environmental Protection Agency (1).

RESULTS

Of the fifteen cosmetic products (Figures 1 through 15), ten samples were found to contain acicular (needle-like) tremolite/actinolite fibers. The population of tremolite/actinolite fibers present in the cosmetic samples is sometimes referred to as a cleavage fragment population. However, many fibers have aspect ratios in excess of 3:1 or 5:1 (Figures 16 through 18) and would thus be counted as asbestos fibers under current OSHA or EPA counting rules. Analytical results are presented in Table 1 below.

REFERENCES

1. U. S. Environmental Protection Agency, "Test Method EPA/600/R-93/116 -- Method for the Determination of Asbestos in Bulk Building Materials."

MVA Number	Description	Analytical Results	Estimated Volume Percent	Estimated Aspect Ratio
Q0375	Mop Compact	Tremolite/Actinolite Detected	1-2%	6:1 to 50:1
Q0376	Golden Lark Compact	Tremolite/Actinolite Detected	1-2%	8:1 to 40 :1
Q0377A	Vintage Make-up Box	Tremolite/Actinolite Detected	Trace (<1%)	4:1 to 20:1
Q0377B	Brush	Tremolite/Actinolite Detected	Trace (<1%)	<10:1
Q0377C	Pencils	Tremolite/Actinolite Detected	Trace (<1%)	<12:1
Q0377D	Grease Paint (5)	Tremolite/Actinolite Detected	Trace (<1%)	<12:1
Q0377E	Moist Rouge (2)	Tremolite/Actinolite Detected	Trace (<1%)	6:1 to 12:1
Q0377F	Lining No. 16	None Detected	NA	NA
Q0377G	Lining No. 22	None Detected	NA	NA
Q0377H	Lining No. 12	None Detected	NA	NA
Q0377I	Lining No. 6	None Detected	NA	NA
Q0377J	Dry Rouge	Tremolite/Actinolite Detected	10%	4:1 to 16:1
Q0377K	Cleansing Cream	None Detected	NA	NA
Q0377L	Face Powder	Tremolite/Actinolite Detected	Trace (<1%)	6.1 to 12:1
Q0378	Cameo Compact	Tremolite/Actinolite Detected	1-2%	6:1 to 20:1

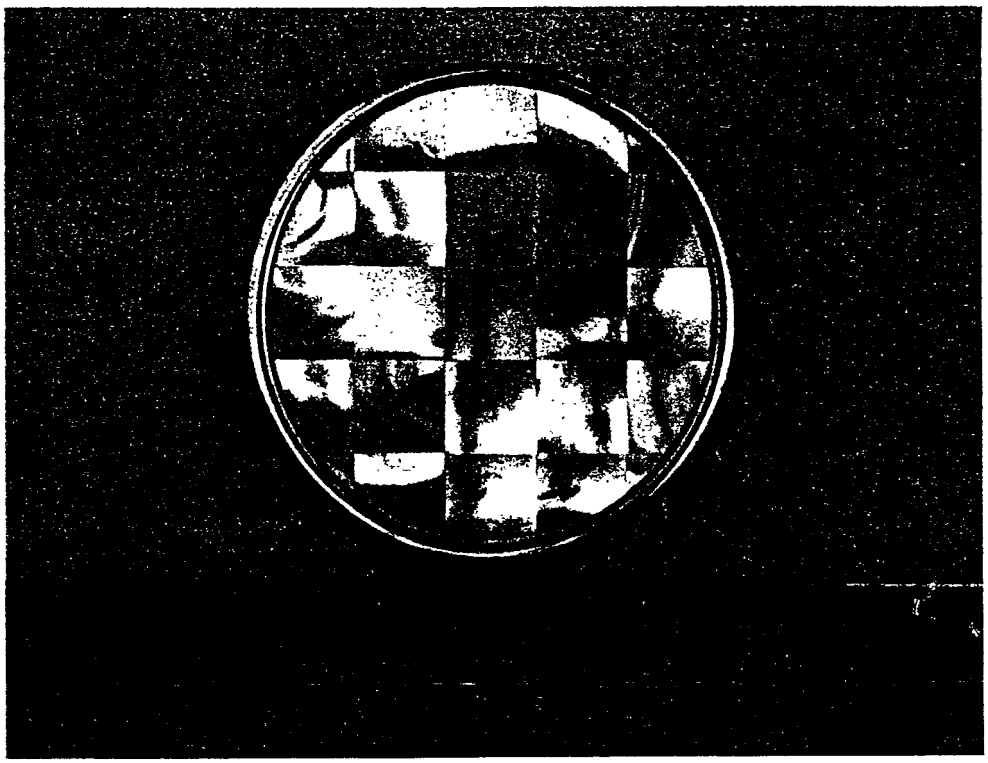


Figure 1. Sample Q0375 Mop Compact

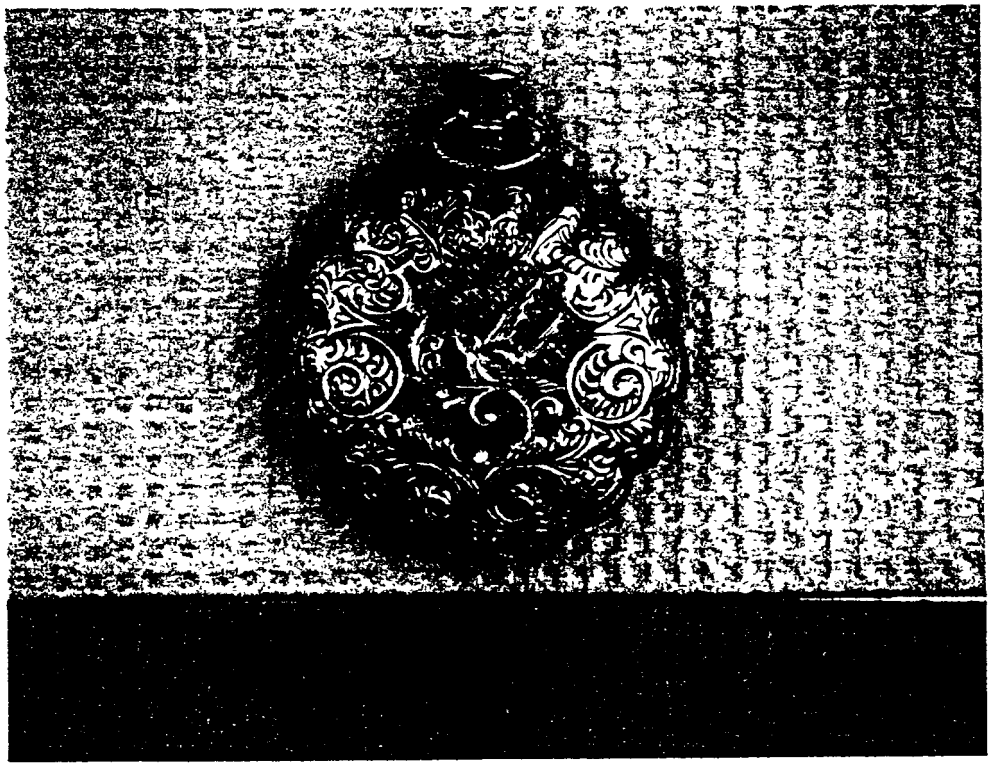


Figure 2. Sample 0376 Golden Lark Compact

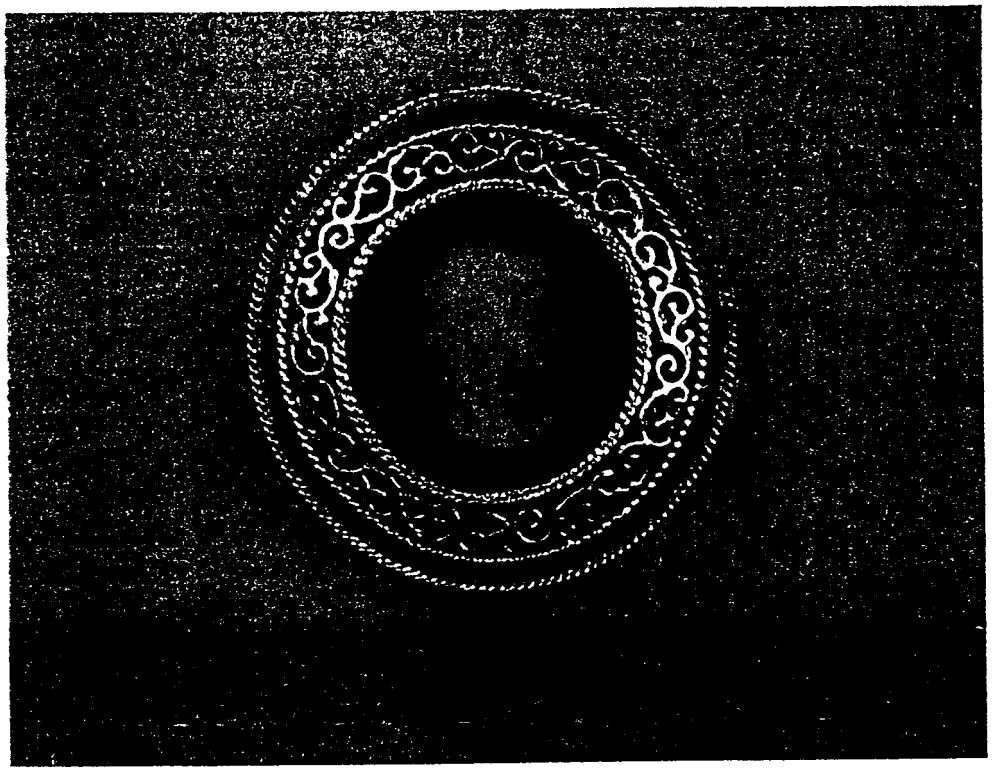


Figure 3. Sample Q0738 - Cameo Compact

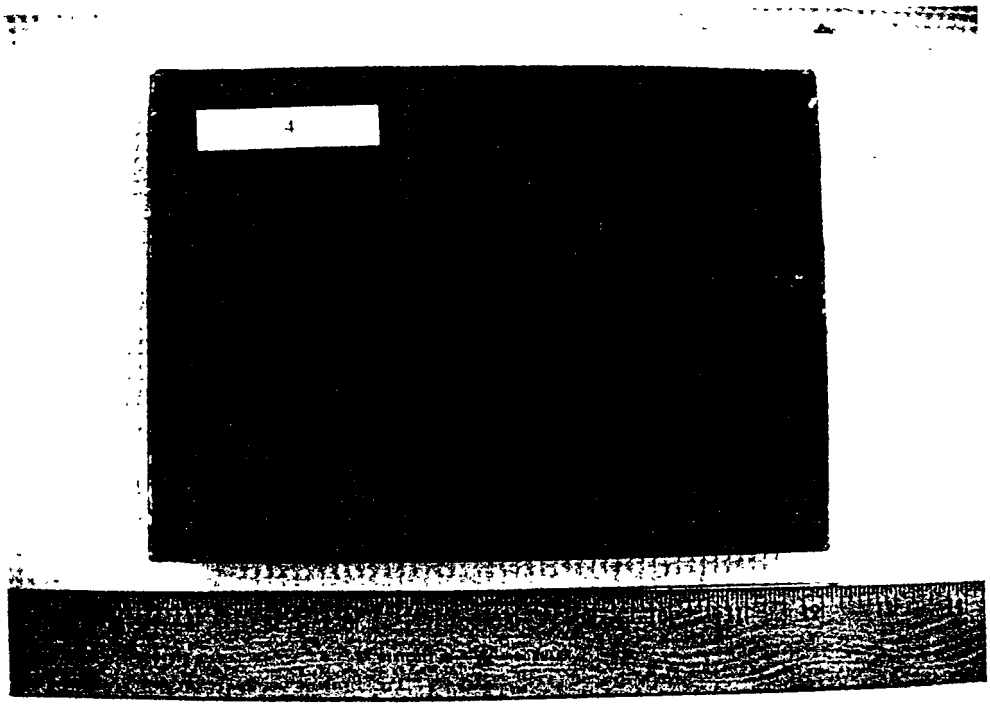


Figure 4. Vintage Make-up Box

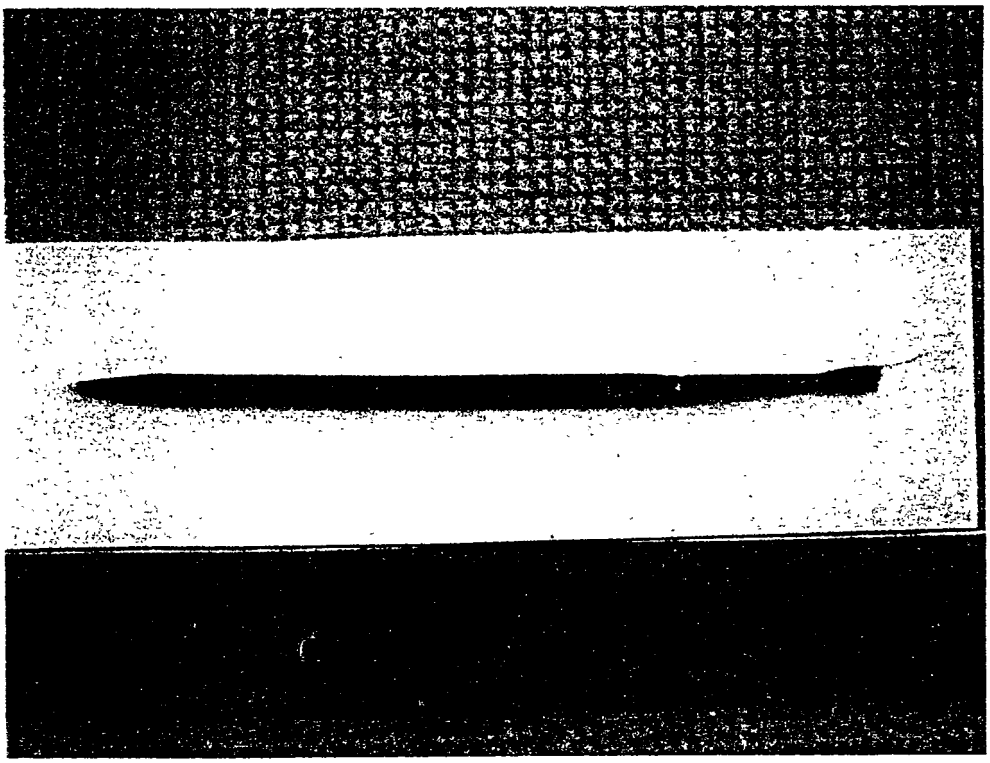


Figure 5. Sample Q0377B - Brush in Make-up Box

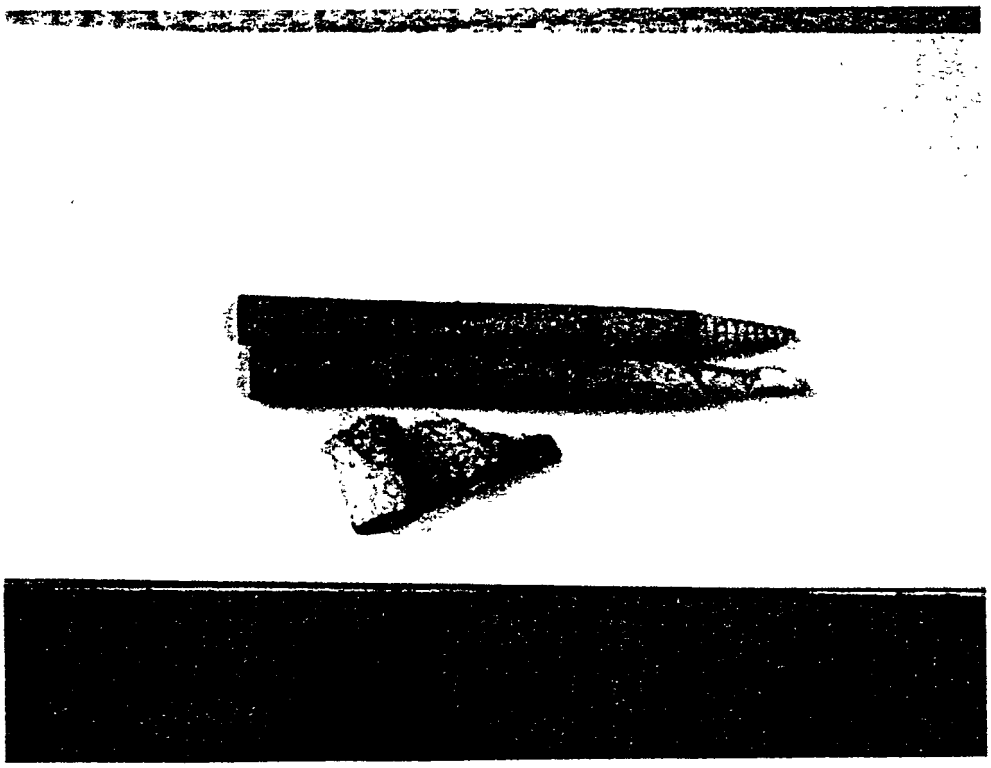


Figure 6. Sample Q0377C - Pencils inside Make-up Box

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Figure 7. Sample Q0377D Grease Paint (5)

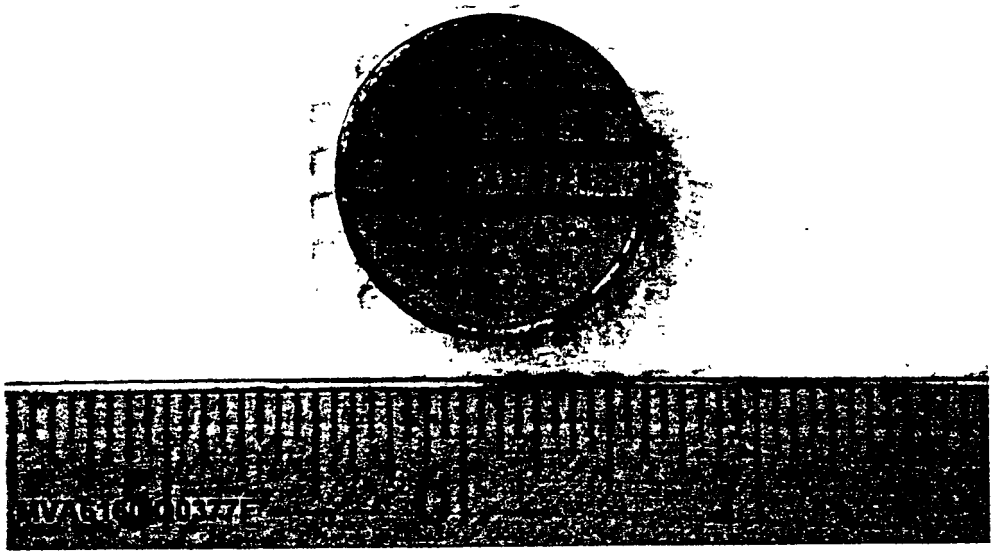


Figure 8. Sample Q0377F - Lining No. 16

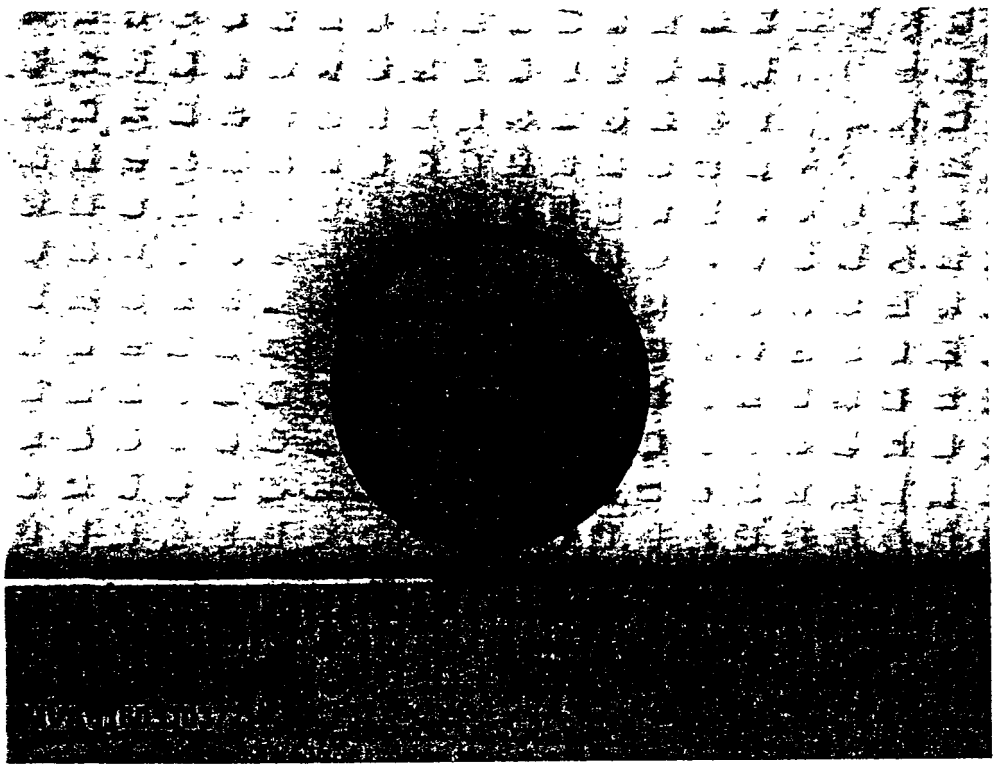


Figure 9. Sample Q0377H - Lining No. 12

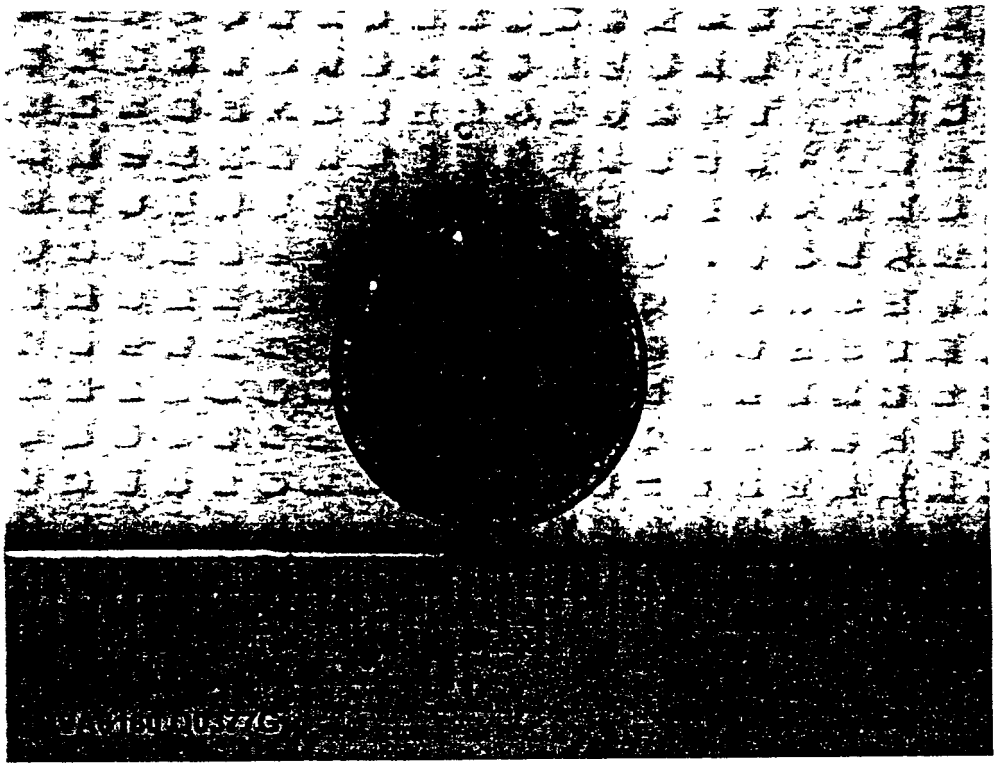


Figure 10. Sample Q0377G - Lining No. 22

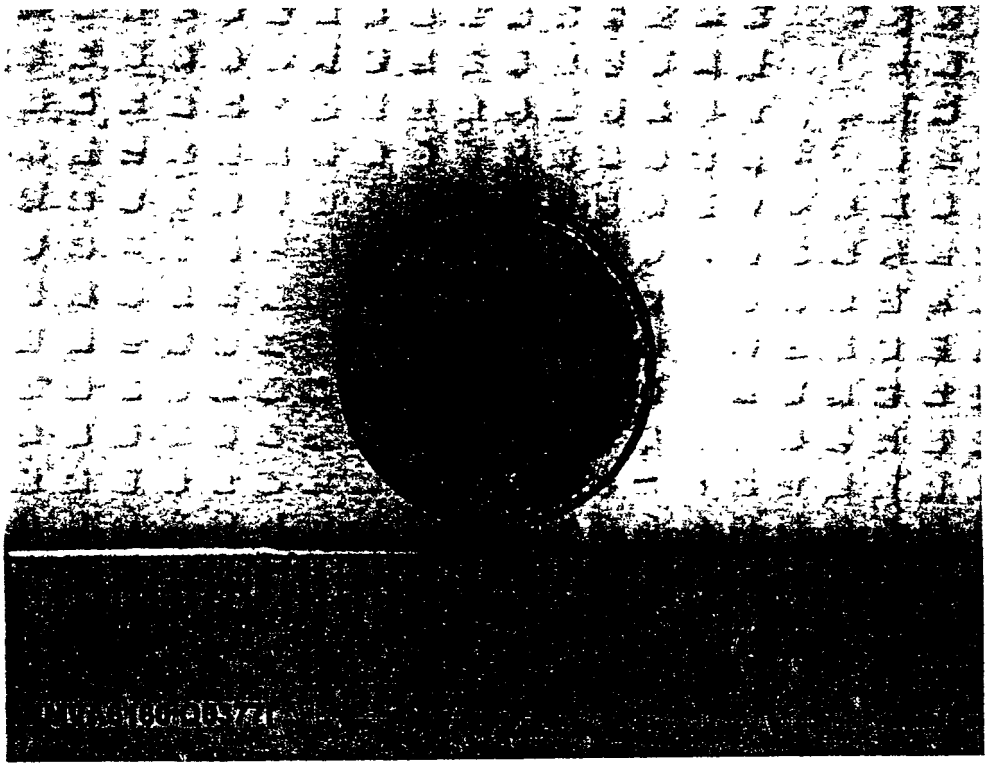


Figure 11. Sample Q0377I - Lining No. 6

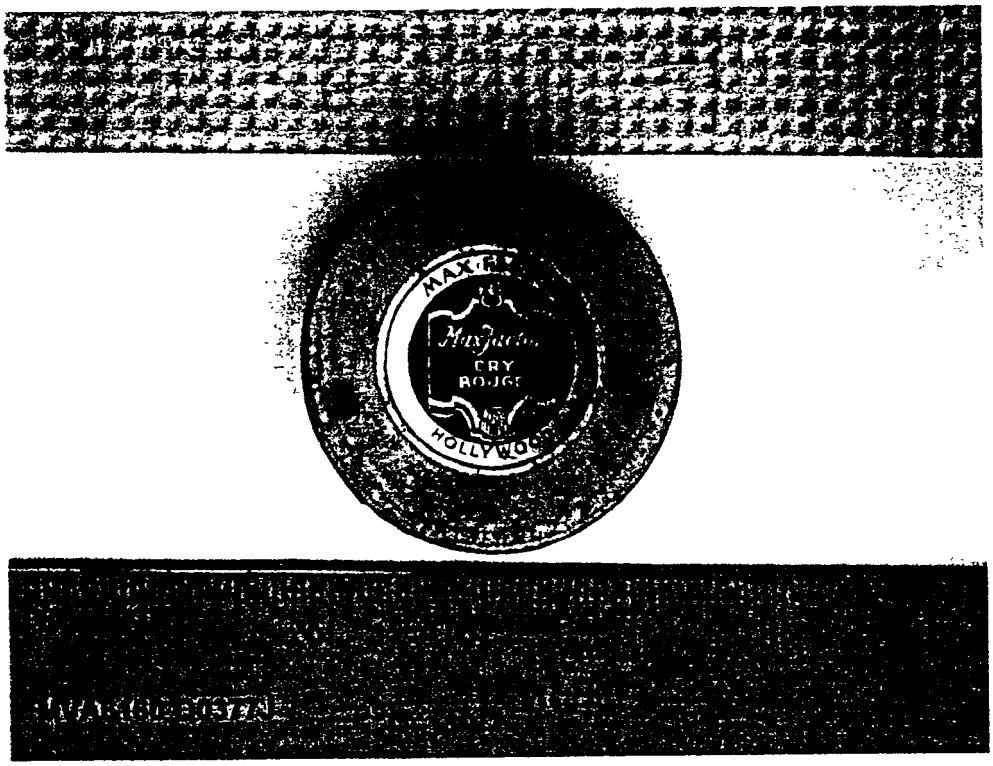


Figure 12. Sample Q0377J - Dry Rouge

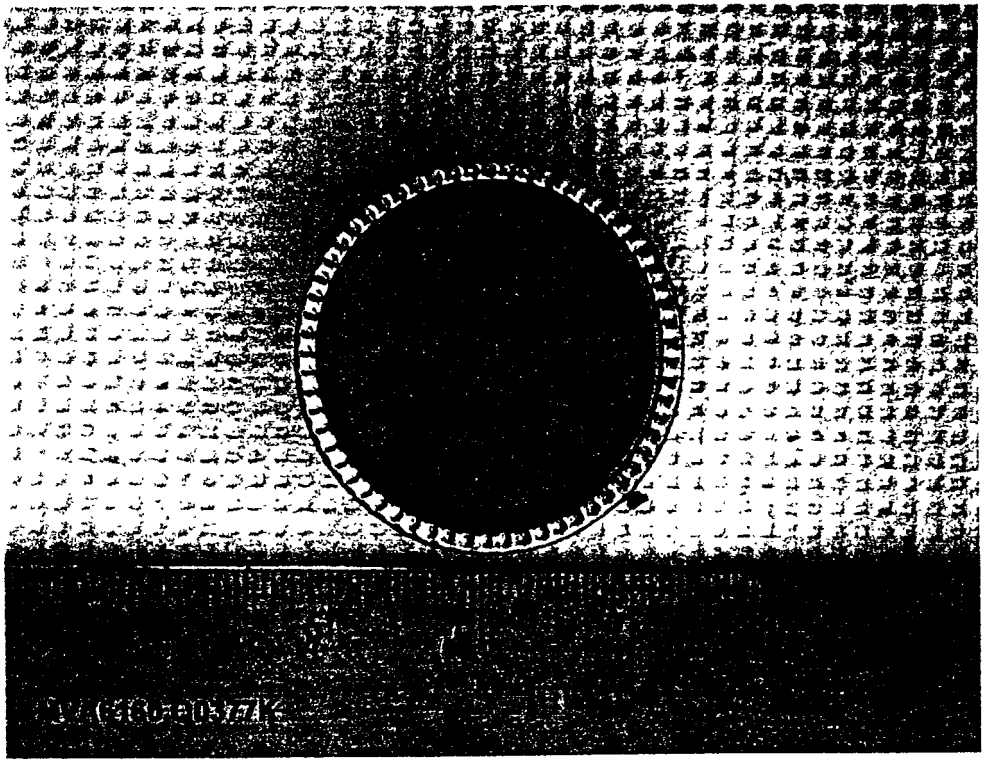


Figure 13. Sample Q0377K - Cleansing Cream

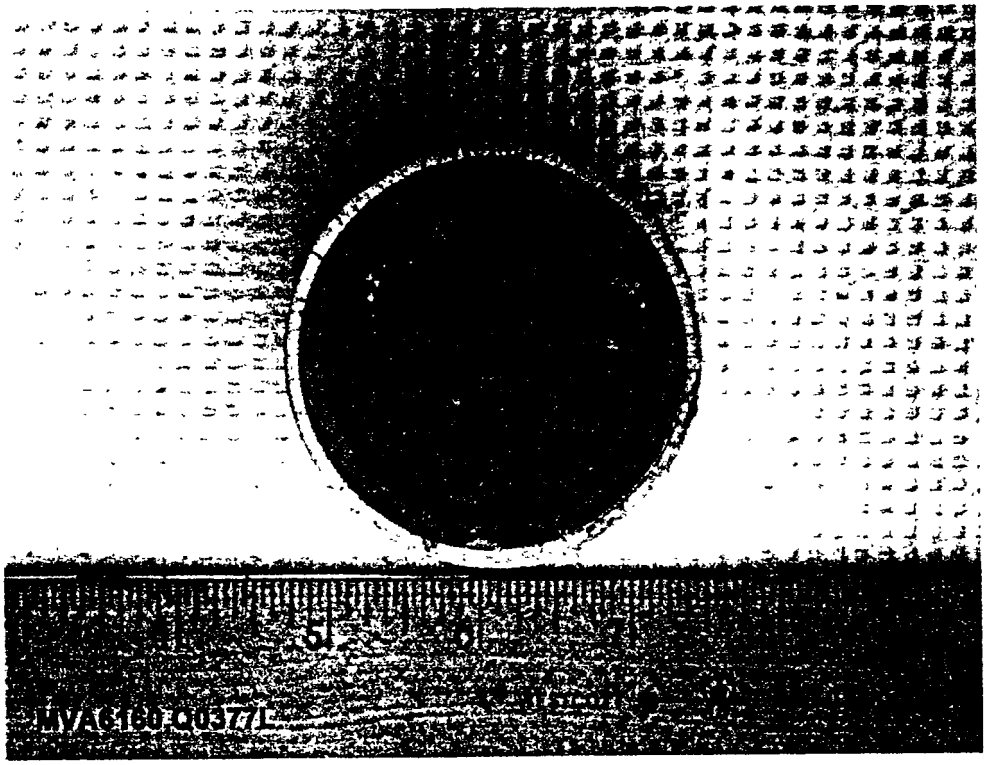


Figure 14. Sample Q0377L - Face Powder

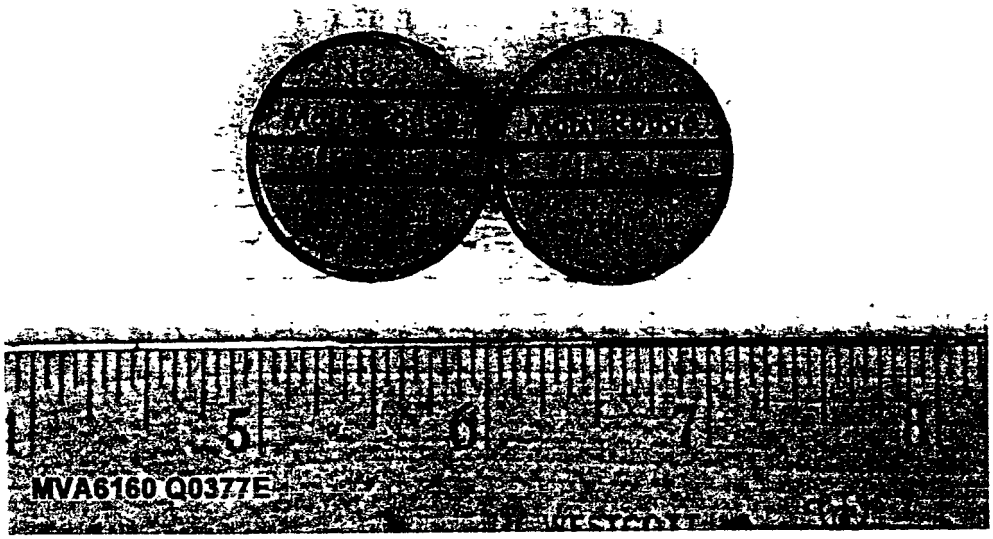


Figure 15. Sample Q0377E - Moist Rouge (2)

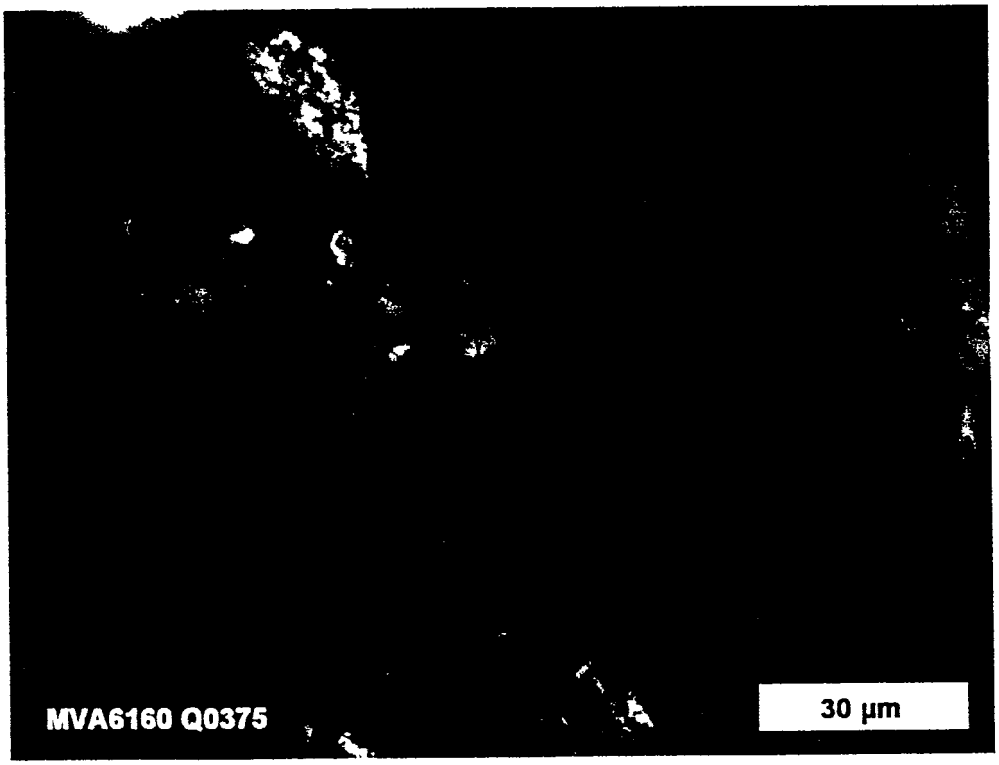


Figure 16. Tremolite fiber found in Sample Q0375, crossed polars.

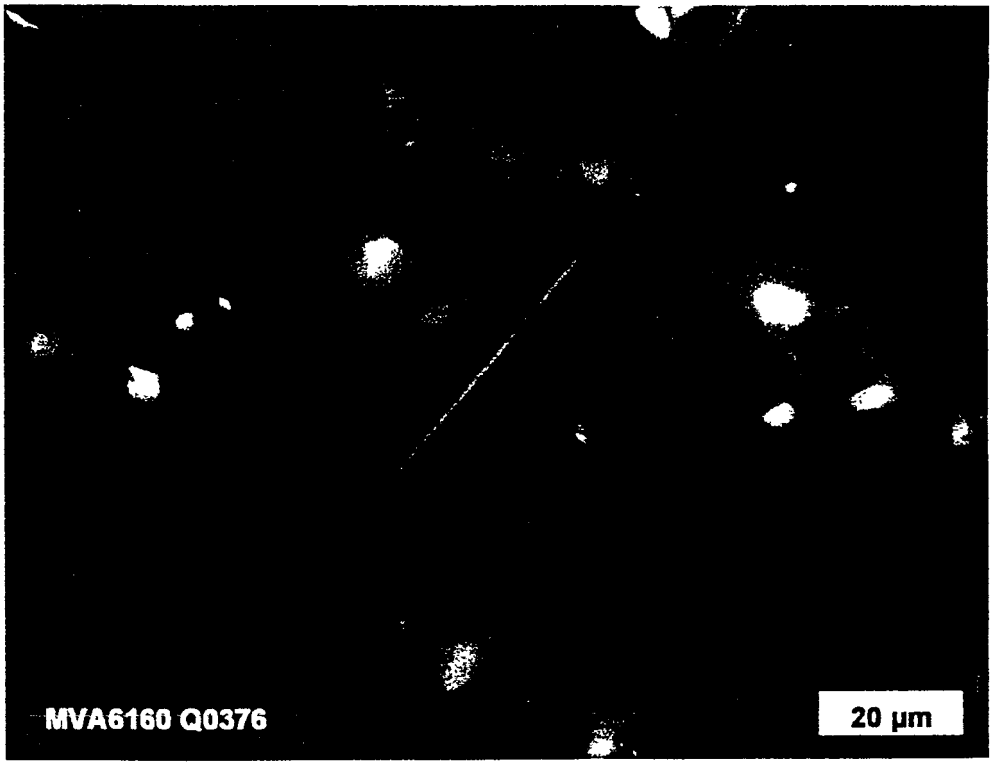


Figure 17. Tremolite found in Sample Q0376, crossed polars.

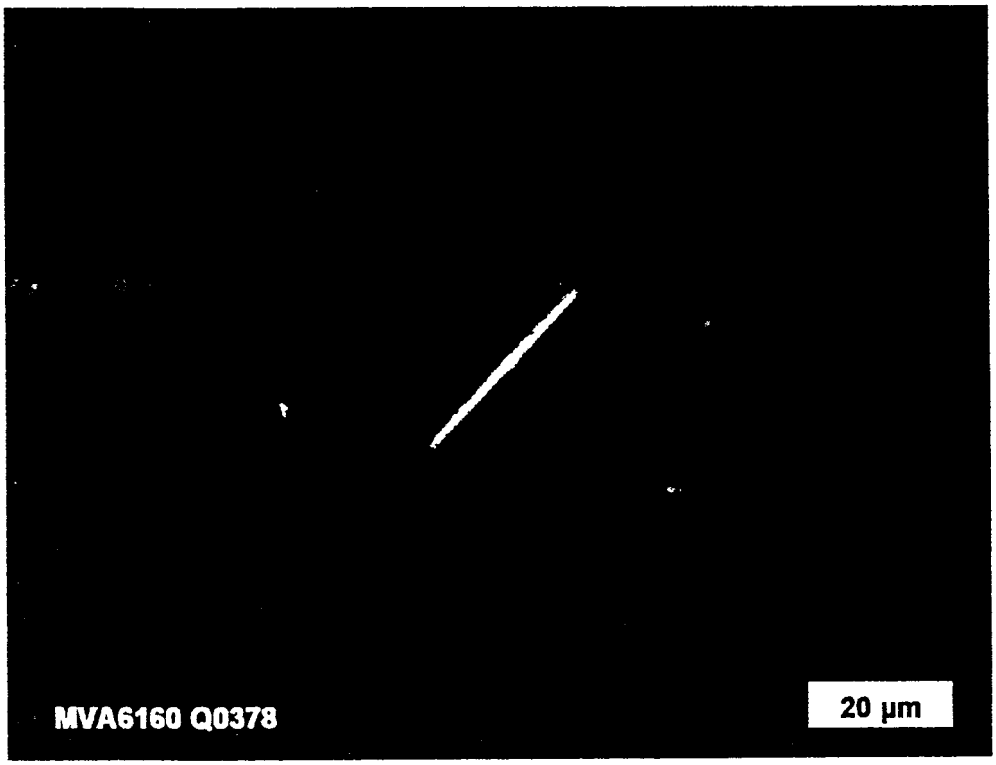


Figure 18. Tremolite found in Sample Q0378, crossed polars.