15 November 1972

Dr. A. J. Goudie
Johnson & Johnson
Research Center
501 George Street
New Brunswick, New Jersey 08901

Dear Dr. Goudie:

Here is our modified thinking on the baby powder samples 108T and 109T. After looking at several fresh samples on the light microscope we have not been able to substantiate the tremolite levels we originally reported.

Yours sincerely,

Ian M. Stewart
Manager, Electron Optics
Group

ajw
Ref: MA 2546
Enclosures

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EXAMINATION

OF

JOHNSON AND JOHNSON'S BABY POWDER

Date: 27 October 1972

MA Number: 2546

Copy of 4

walter c. mccrone associates, inc.
2820 SOUTH MICHIGAN AVENUE • CHICAGO, ILLINOIS 60616

EXAMINATION OF JOHNSON AND JOHNSON'S BABY POWDER

Summary

Two samples of Johnson and Johnson's Baby Powder, batch number 108T and 109T, which correspond to the samples examined by Professor Seymour Z. Lewin of New York University on behalf of the FDA have been examined by x-ray diffraction, light microscopy, transmission electron microscopy and electron diffraction to determine whether they contain any asbestiform minerals.

Both samples contained an insignificant amount of tremolite — a few isolated crystals. Neither sample contained chrysotile.

Introduction

On behalf of the FDA, Professor Seymour Z. Lewin of New York University is examining a number of commercial talcum powders for the presence of asbestiform minerals. Two of the samples which he has examined are samples of Johnson and Johnson's Baby Powder, batch number 108T and batch number 109T. Johnson and Johnson therefore requested Walter C. McCrone Associates to examine samples from the same batches to determine whether they contained any asbestiform minerals.

Materials and Method of Conducting Tests

Two samples were submitted, identified as Johnson and Johnson's Baby Powder, batch numbers 108T and 109T.

For x-ray diffraction examination, the samples were examined on a Phillips-Norelco verticle diffractometer using CuKα radiation and a scanning speed of 1° per minute. The dispersion staining technique was used for the light microscopical examination and the electron microscopy-electron diffraction examination was carried out using procedures previously described (MA report 2330-1; dated 10 August 1971).

Results

X-ray Diffraction

The diffractograms were carefully examined in the vicinity of the major peaks of chrysotile and tremolite. Neither mineral was present. The presence of peaks in the vicinity of 12.0-12-5° 2θ, the region in which one of the principal lines of chrysotile may be found, was correlated with peaks in the vicinity of 6° 2θ and are thus attributable to chlorites. No significant peaks were observed in the 24° region which would be required were chrysotile present.

Light Microscopy

Using the dispersion staining technique and a liquid of refractive index 1.550, the samples were examined for chrysotile particles and fibers, but none could be found. Using a similar technique with a liquid of refractive index 1.605, the samples were similarly examined for the presence of tremolite and a few individual crystals were found, some rod shaped.

Electron Microscopy and Electron Diffraction

Several electron microscope grids from both samples were examined in their entirety and although some fibers were observed these were shown by electron diffraction to be shards of talc or rolled talc. No chrysotile fibers were found.

Conclusion

A detailed examination of two samples of Johnson and Johnson's Baby Powder, batch numbers 108T and 109T has shown this material to be substantially free of asbestiform minerals. A few tremolite rods were observed in both samples. No chrysotile has been detected.

Respectfully submitted,

Ian M. Stewart
Manager, Electron Optics Group

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Both samples contained an insignificant amount of tremolite — a few isolated crystals. Neither sample contained chrysotile.

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Materials and Method of Conducting Tests

Two samples were submitted, identified as Johnson and Johnson's Baby Powder, batch numbers 108T and 109T.

For x-ray diffraction examination, the samples were examined on a Phillips-Norelco verticle diffractometer using CuKα radiation and a scanning speed of 1° per minute. The dispersion staining technique was used for the light microscopical examination and the electron microscopy-electron diffraction examination was carried out using procedures previously described (MA report 2330-1; dated 10 August 1971).

EXAMINATION OF JOHNSON AND JOHNSON'S BABY POWDER

Summary

Two samples of Johnson and Johnson's Baby Powder, batch number 108 K and 109 K, which correspond to the samples examined by Professor Seymour Z. Lewin of New York University on behalf of the FDA have been examined by x-ray diffraction, light microscopy, transmission electron microscopy and electron diffraction to determine whether they contain any asbestiform minerals.

Both samples contained an insignificant amount of tremolite (<1%). Neither contained chrysotile or chrysotile contained chrysotile.

Introduction

On behalf of the FDA, Professor Seymour Z. Lewin of New York University is examining a number of commercial talcum powders for the presence of asbestiform minerals. Two of the samples which he has examined are samples of Johnson and Johnson's Baby Powder, batch number 108 K and batch number 109 K. Johnson and Johnson therefore requested Walter C. McCrone Associates to examine samples from the same batches to determine whether they contained any asbestiform minerals.

Materials and Method of Conducting Tests

Two samples were submitted, identified as Johnson and Johnson's Baby Powder, batch numbers 108 K and 109 K.

On x-ray diffraction examination, the samples were examined on a Philips-Norelco vertical diffractometer using CuK radiation and a scanning speed of 1° per minute. The dispersion staining technique was used for the light microscopical examination and the electron microscopy-electron diffraction examination was carried out using procedures previously described (MA report 838-1; dated 1 August 1977).

Results

X-ray Diffraction

The diffractograms were carefully examined in the vicinity of the major peaks of chrysotile and tremolite. Neither mineral was present. The presence of peaks in the vicinity of 12.0-12-5° 2θ, the region in which one of the principal lines of chrysotile may be found, was correlated with peaks in the vicinity of 6° 2θ and are thus attributable to chlorites. No significant peaks were observed in the 24° region which would be required were chrysotile present.

Light Microscopy

Using the dispersion staining technique and a liquid of refractive index 1.550, the samples were examined for chrysotile particles and fibers, but none could be found. Using a similar technique with a liquid of refractive index 1.605, the samples were similarly examined for the presence of tremolite and a few individual crystals were found, some rod shaped.

Electron Microscopy and Electron Diffraction

Several electron microscope grids from both samples were examined in their entirety and although some fibers were observed these were shown by electron diffraction to be shards of talc or rolled talc. No chrysotile fibers were found.

Conclusion

A detailed examination of two samples of Johnson and Johnson's Baby Powder, batch numbers 108T and 109T has shown this material to be substantially free of asbestiform minerals. A few tremolite rods were observed in both samples. No chrysotile has been detected.

Respectfully submitted,

Ian M. Stewart
Manager, Electron Optics Group

Results

X-ray Diffraction

The diffractograms were carefully examined in the vicinity of the major peaks of thermoplastic and textiles. Nylon 6 material was present. The presence of peaks in the vicinity of 12.0-12.5° 2θ, the region in which one of the principal lines of glycerite may be found, was correlated with peaks in the vicinity of 0° 2θ and are thus substantially to chlorite. No significant peaks were observed in the 24° region which would be required were glycerite present.

Light Microscopy

Using the dispersion staining technique and a liquid of refractive index 1.540, the sample were examined for glycerite particles and fibers, but none could be found. Using a similar technique with a liquid of refractive index of the two samples would be approximately 0.5% for 1.58% and about 0.2-0.3% for 100%.

Electron Microscopy and Electron Diffraction

Several electron microscope grids from both samples were examined in their entirety and although some fibers were observed these were shown by electron diffraction to be chlorite of talc or rolled talc. No glycerite fibers were found.

Conclusion

A detailed examination of two samples of Johnson and Johnson's Baby Powder, batch numbers 1707 and 1081 has shown this material to be substantially free of asbestiform minerals. A few tremolite rods were observed in both samples at a level less than 0.5%. No glycerite has been detected.

Respectfully submitted,

Ian M. Stewart
Manager, Electron Optics Group

MA2546

Dear Dr Goudie

Here is our modified thinking on the Baby Powder Samples 108T and 109T. After looking at several fresh samples on the light-microscope we have not been able to substantiate the tremolite levels we originally reported. ~~and~~ Although it is possible that we ~~had misidentified~~ ~~must presume~~ ~~to have therefore~~ ~~and~~ This report is basically identical to the earlier one

Ys.
M.

27 October 1972

Dr. A. J. Goudie
Johnson and Johnson
Research Center
501 George Street
New Brunswick, New Jersey 08901

Dear Dr. Goudie:

Here is our report on the baby powder samples. I hope to have the Shower to Shower report out to you soon, but something always seems to break loose when I sit down to write it.

Yours sincerely,

Ian M. Stewart
Manager, Electron Optics
Group

ajw
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Ecnlsoure

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Both samples contained an insignificant amount of tremolite (~~<0.5%~~). a few isolated crystals Neither sample contained chrysotile.

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Electron Microscopy and Electron Diffraction

Several electron microscope grids from both samples were examined in their entirety and although some fibers were observed these were shown by electron diffraction to be shards of talc or rolled talc. No chrysotile fibers were found.

Conclusion

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