

Frontier Analysis, Ltd.

TECHNICAL SERVICE RESPONSE NO.: UT010

Subject: Identification of Two Gel Materials Found in A Crop Circle Formation in Brummen, Holland (August 2, 1997)

Date: January 15, 2001

Requested By: Nancy Talbott
BLT Research

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Background/Objective: White, somewhat tacky, gelatinous-appearing “bread-like” materials were found underneath flattened crop (wheat) in the centers of 6 of the 7 circles in a crop formation. The formation, found August 2, 1997 by Robert Boerman, was adjacent to a well-known “healing center” known as the “Michael Farmhouse” in Brummen, The Netherlands. Following are photographs of the crop formation and one of the gel materials as found¹.



Above is the crop formation where the gel was found. “Michael Farmhouse” buildings are also visible. Prehistoric burial mounds, destroyed when nearby roads were built, existed in the area until the 1920s.

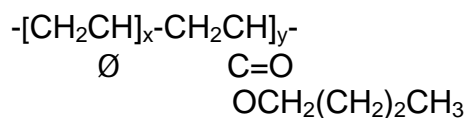
¹ Photographs courtesy of BLT Research and taken by Robert Boerman.



Some gel material as found in the center of one of the crop circles.

Conclusions:

Two samples of gelatinous materials are identified as a styrene/butyl acrylate copolymer. It has the following structure:



This is a well-known polymer which is commercially manufactured. Mineral materials (dirt) are present in KS-04-27 at very low levels, while KS-04032 contains significant amounts. Some common uses for this copolymer are in many types of coatings, e.g. anticorrosion coatings, timber and concrete coatings, and wall coatings. The physical appearance of the polymer is unusual. It is speculated that it was exposed to perhaps heat or some energy force to cause the melt appearance.

Procedure:

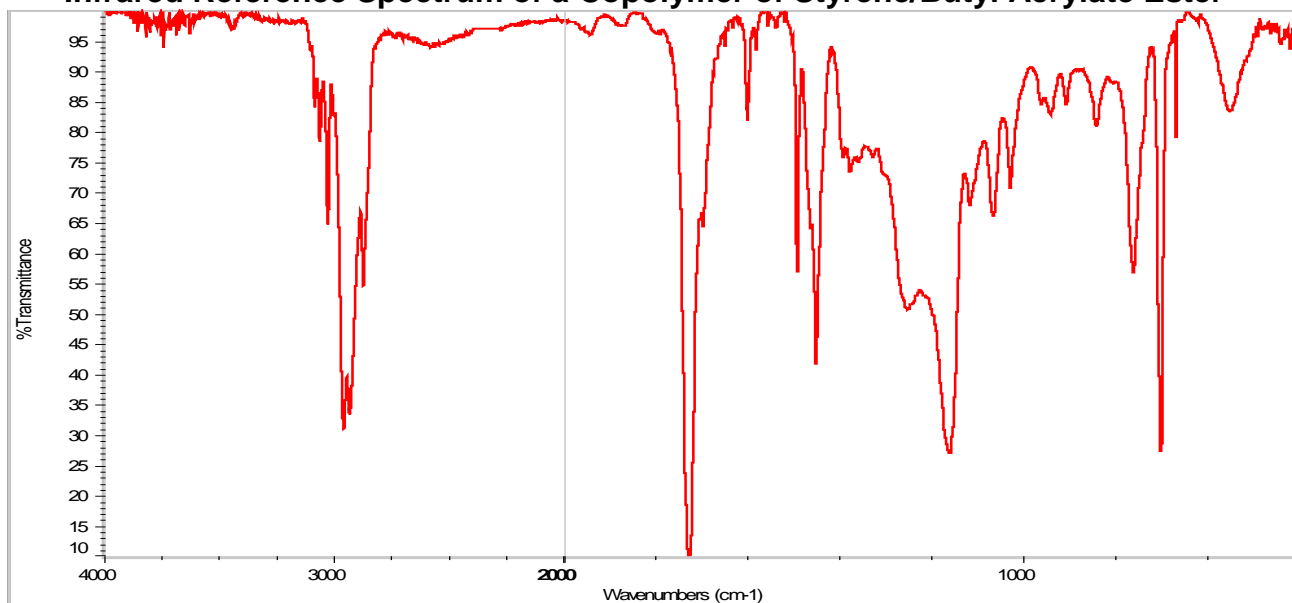
Samples: Two samples of the white material were submitted with the following identifications².

- KS-04-27, "Pliable, gum-like particles material" found in a crop circle formation.
- KS-04-32, "White stuff which is now actually brown. It's the larger granules stuck together on top of the brown sand which has colored it in the bag... Found in flattened pancakes under centers of formations, underneath the laid crop."

Infrared spectra were obtained of the samples using the Harrick SplitPea® cell on the Nicolet Avatar 360 spectrometer. Microscope photographs were obtained using the Leika GZ6 stereomicroscope interfaced to a Kodak Digital Science MDS 120 camera. EDX

² The white materials were samples by Rudi Klijnstra.

Infrared Reference Spectrum of a Copolymer of Styrene/Butyl Acrylate Ester³

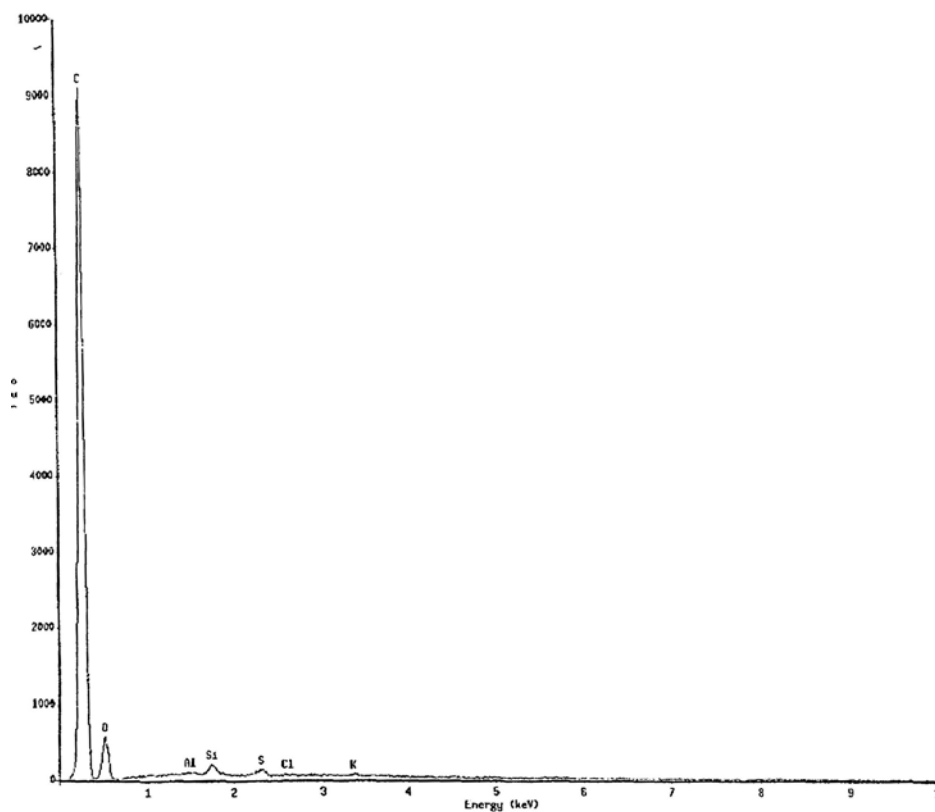


A microscope photo of the gel sample follows. It is taken at approximately 60x magnification. It shows the gel has a white lumpy appearance.



EDX data indicate a predominant amount of carbon, some oxygen, small amounts of aluminum, silicon, sulfur, and trace amounts of chlorine and potassium. The presence of carbon and oxygen support the infrared identification of styrene/butyl acrylate copolymer. The aluminum, silicon and sulfur represent very small amounts of residual minerals, i.e. dirt. The data follow:

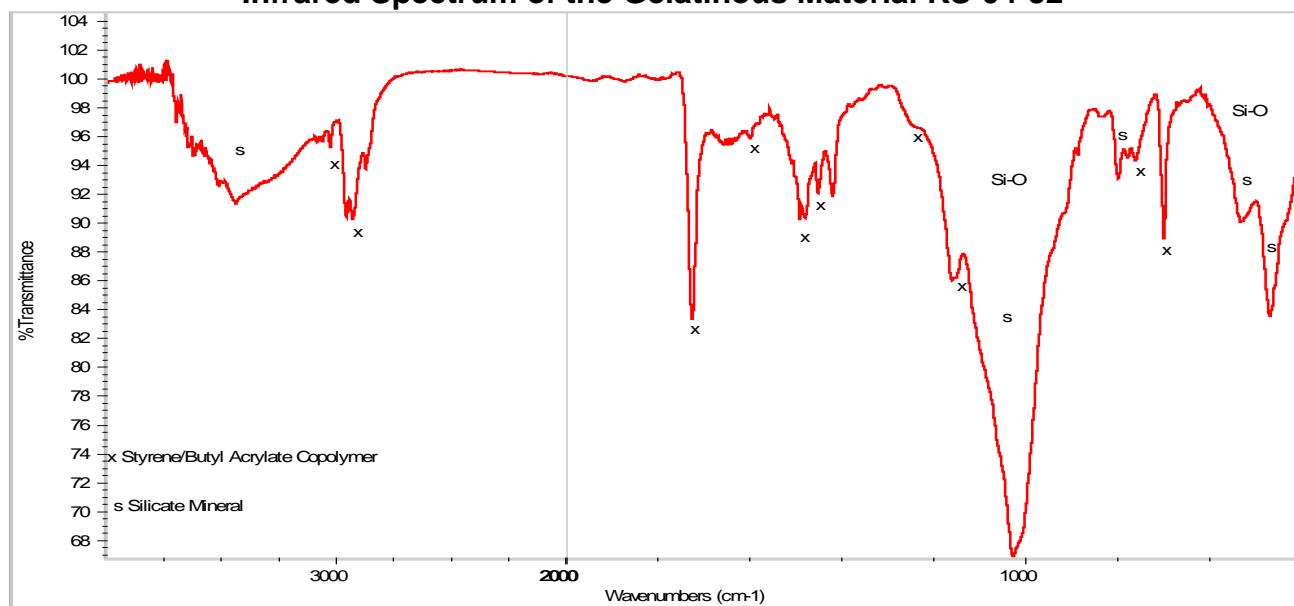
³ Hummel/Scholl, "Atlas of Polymer and Plastics Analysis," Verlag Chemie GmbH, D-6940 Weinheim, Volume 2 Part a/II, References 3023-3024.



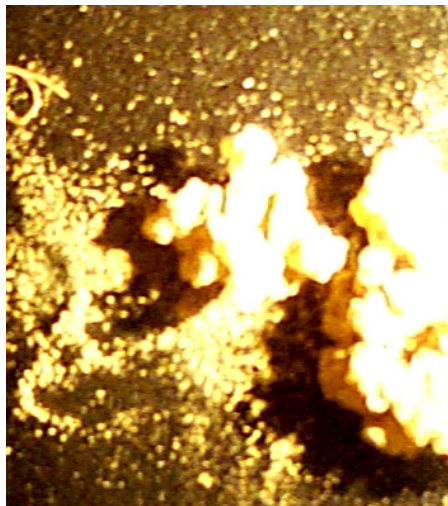
●Sample KS-04-32

The infrared spectrum shows the gel in this sample is of the same composition as KS-04-27, i.e. a copolymer of styrene and butyl acrylate. Additionally, the spectrum shows bands typical of silicate mineral (dirt). The dirt coats the tacky gel material. The spectrum follows:

Infrared Spectrum of the Gelatinous Material KS-04-32



A photomicrograph was taken of the sample at 60x magnification. The following photograph shows fine particulates from the dirt/sand, in addition to the gel.



File: UT010.DOC

Distribution:

Ted Phillips

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