

S & N Labs



S & N LABS

2021 E. Fourth Street

Santa Ana, California 92705

(714) 543-2211

3 May 2000

Job Number:	10201
PO Number:	verbal

Liz Aguirre
Ultraseal International
1100 North Wilcox Avenue
Los Angeles, California 90038

REPORT OF ANALYSIS

One small plastic jar (unlabeled) and one plastic bag labeled *UltraSeal same product sent to China* were received on 28 March 2000. The contents of the jar were compared to the contents of the bag to determine any chemical differences between them. Techniques employed were Fourier-transform infrared spectroscopy (FT-IR), gas chromatography (GC), and GC combined with mass spectroscopy (GC-MS).

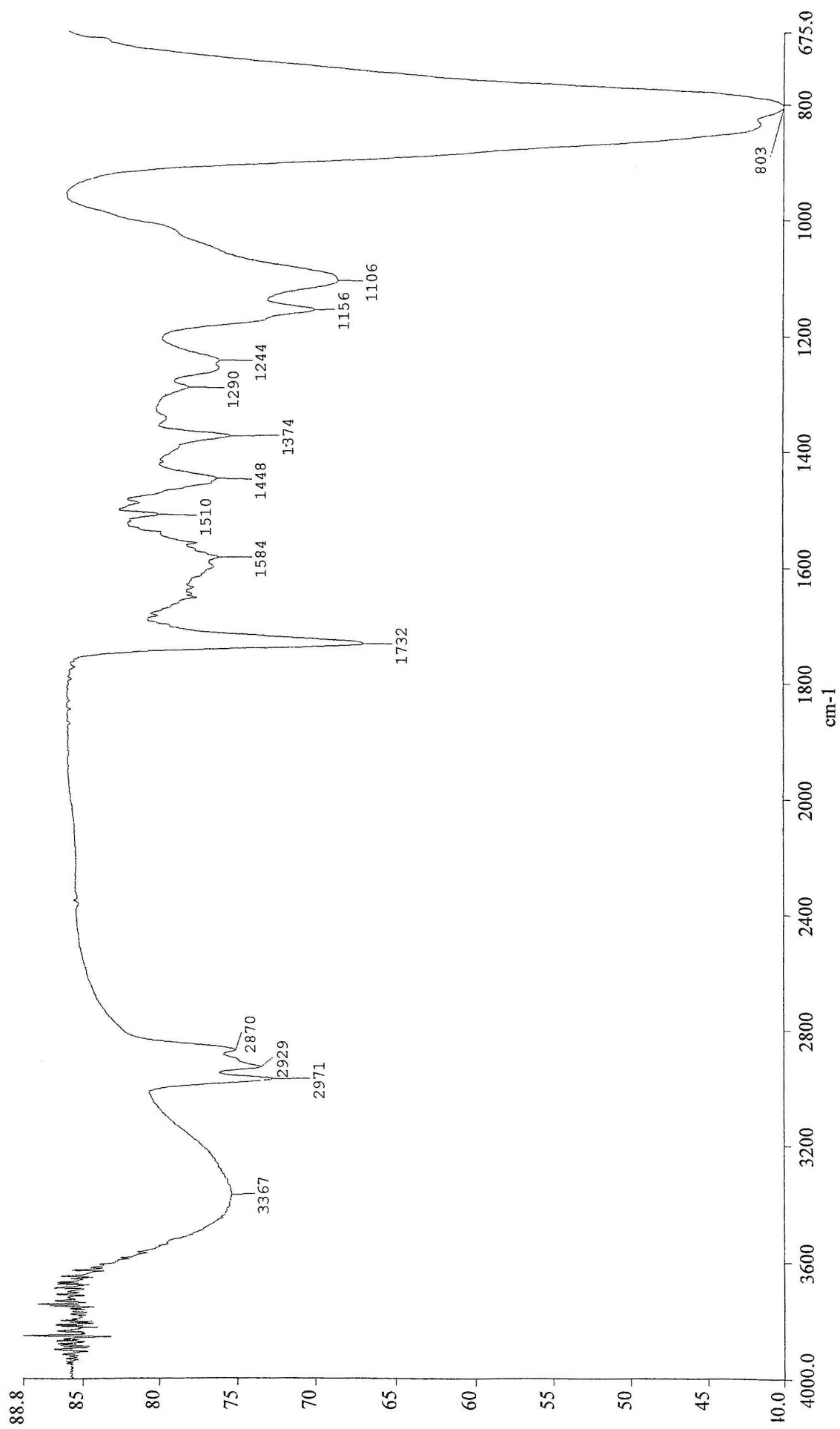
The solvents in the samples were compared by GC. Both samples showed ethylene glycol with no other apparent solvents.

Since the questioned (subject) sample was brown, the sample was dried and extracted with solvents to isolate the source of the coloration. The brown color was soluble in methanol and methylene chloride but not water. The exemplar was extracted with the same series of solvents. The extracts were compared by FT-IR. The spectra are quite different with the brown sample showing a strong aliphatic hydrocarbon peak possibly indicating a petroleum oil.

The extracts were then compared using GC-MS. The major component of the exemplar was an oligomeric series, possibly attributable to the rust inhibitor in the formulation. In contrast, the brown sample showed a heavy, degraded oil and some rubber components including a rubber antioxidant and several plasticizers.

We conclude that the questioned sample is heavily contaminated with oil and other materials. The spectra and chromatograms that show these differences are enclosed for your reference.

Neil E. Spingarn, Ph.D.
President



10201X04.001

S&N Labs Date: 4/28/00

Spectrum Pathname: C:\IRDATA\SPECTRA\10201X04.001

Apodization: Strong

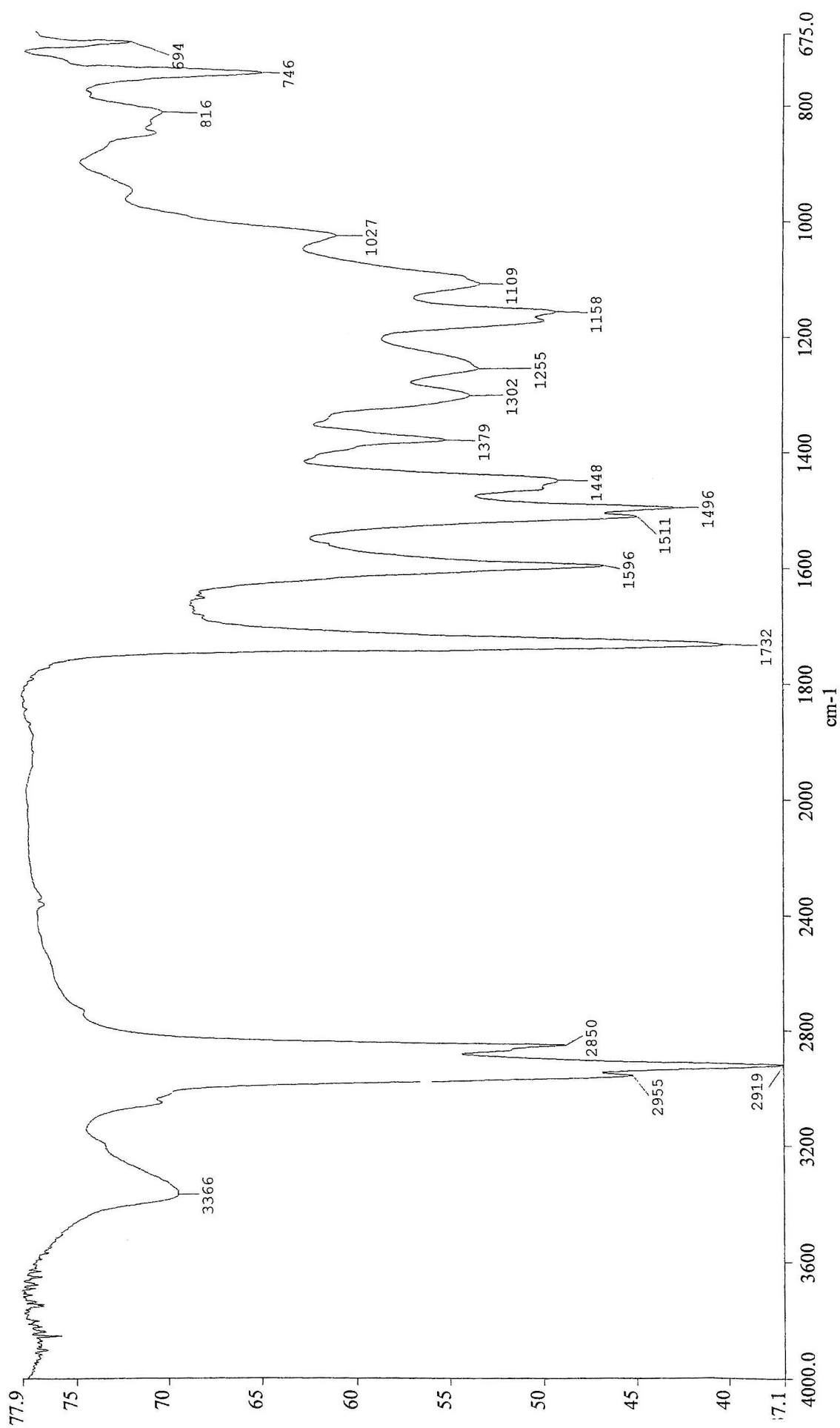
Description: H2O insoluble/MeCl2 ext/MeOH ext exemplar

Background Scans: 50

Detector: MCT

Resolution: 4 cm⁻¹

Accumulations: 50



10201X03.001

S&N Labs	Date: 4/14/00	Spectrum Pathname: C:\IRDATA\SPECTRA\10201X03.001	Apodization: Strong
Description: H2O insoluble/MeCl2 ext/MeOH ext brown sample			Background Scans: 50
Detector: MCT			Resolution: 4 cm-1
			Accumulations: 50

Chromatogram Plot

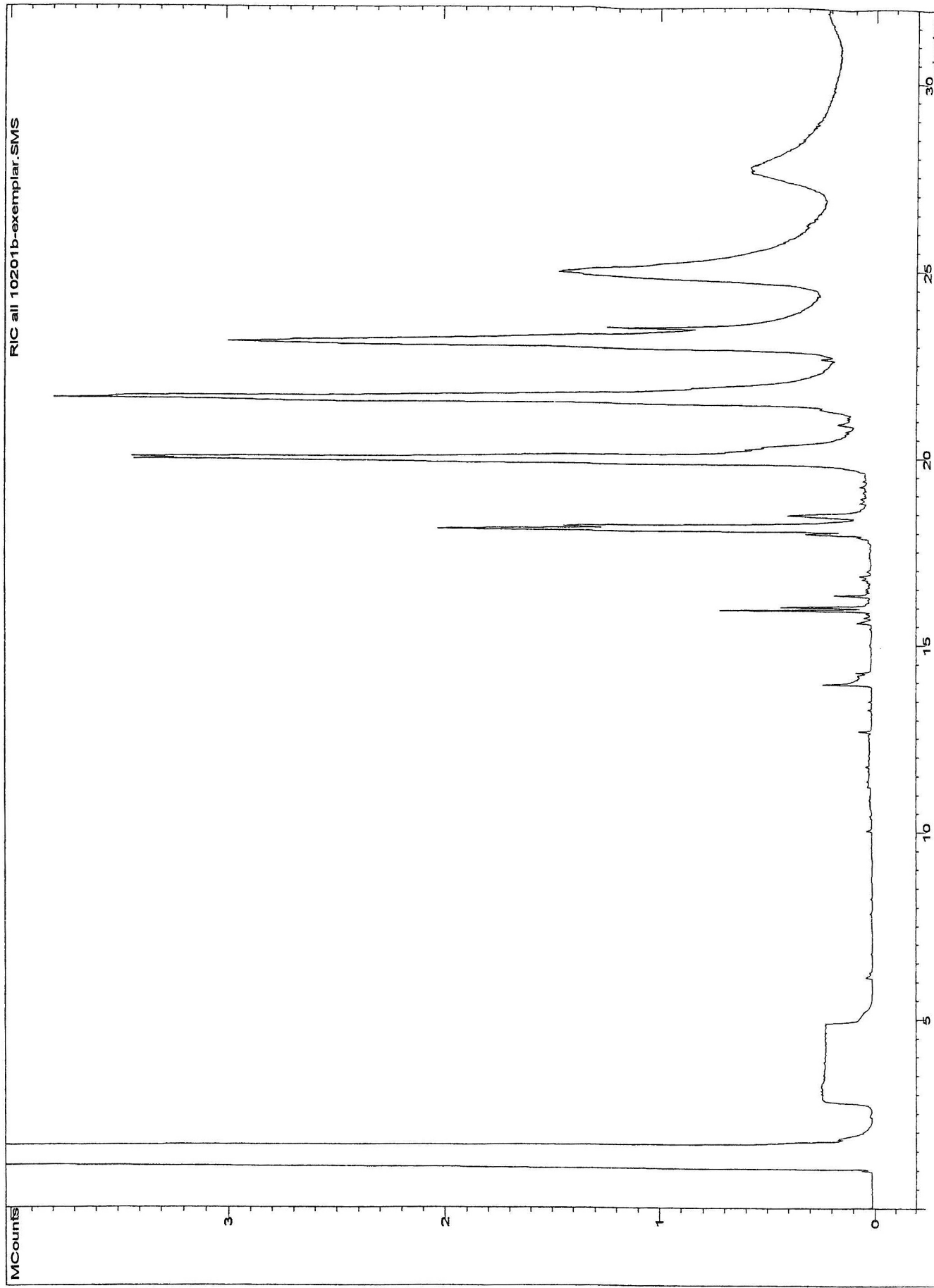
File: c:\saturnws\slabsdata\10201\10201b-exemplar.sms

Sample:

Scan Range: 1 - 1928 Time Range: 0.00 - 32.00 min.

Operator:

Date: 4/28/00 3:54 PM



Chromatogram Plot

File: c:\saturnws\snlab\data\10201\10201-sample brown.sms

Sample:

Operator:
Date: 4/19/00 1:56 PM

Scan Range: 1 - 1993 Time Range: 0.00 - 32.00 min.

