

LIGO-T940045-00-B



Chicago Bridge & Iron
TELEFAX TRANSMISSION *Technical Services Company***Research Center**
1501 North Division Street
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TO:	LARRY JONES	FROM:	STEVE PETERS
COMPANY:	CALTECH	DATE:	12/15/94
FAX NO.:	(618) 304-9834	# OF PAGES:	9 (including cover)

Larry,

Attached is the FTIR report from Fitzsimmons dated 12/6/94 for the cleanliness assessment samples taken during the cleaning of the 8' section of beam tube.

Please call if you have any questions or comments concerning the attached report.

Steve Peters



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COMPANY:	<u>CALTECH</u>	DATE:	<u>12/15/94</u>
FAX NO.:	<u>(815) 304-9834</u>	# OF PAGES:	<u>3 (Including cover)</u>

Larry,

Per your request I am transmitting the last two pages of the FTIR report from Fitzsimmons dated 12/6/94 for the cleanliness assessment samples taken during the cleaning of the 8' section of beam tube. This is the report you received this morning missing the last two pages.

Please call if you have any questions or comments concerning the attached report.


Steve Peters

*attached at end of
original fax'd report*

R. V. FITZSIMMONS AND ASSOC. INC.**CHEMICAL ANALYSTS AND CONSULTANTS**

1860 Arthur Drive

West Chicago, Illinois 60185

(708) 231-0680

FAX: (708) 231-0811

ANALYSIS REPORT FOR:

CBI TECHNICAL SERVICES
1501 N. Division St.
Plainfield, IL 60544
Attn: Steve Peters

PURCHASE ORDER NO. 12-007 Rev. 0

DATE 12 / 6 / 94

REPORT OF MATERIALS ANALYSIS: Analysis of three propanol solutions for non-volatiles content.

Samples submitted 12/02/94: Virgin alcohol
Alcohol Rinse
Alcohol Wash

METHODS: For both the propanol solvent and the contaminated propanol solution, 100 ml of each liquid was quantitatively oven dried in clean glass vessels. The non-volatile materials left after the oven drying were analyzed by FTIR spectral analysis on a KBr window for identification and comparison. The ordinate expansion factor (abex) was kept the same for all the spectra except where indicated. Copies of the FTIR spectra enclosed.

RESULTS:Non-Volatile Content of the Propanol Solvent

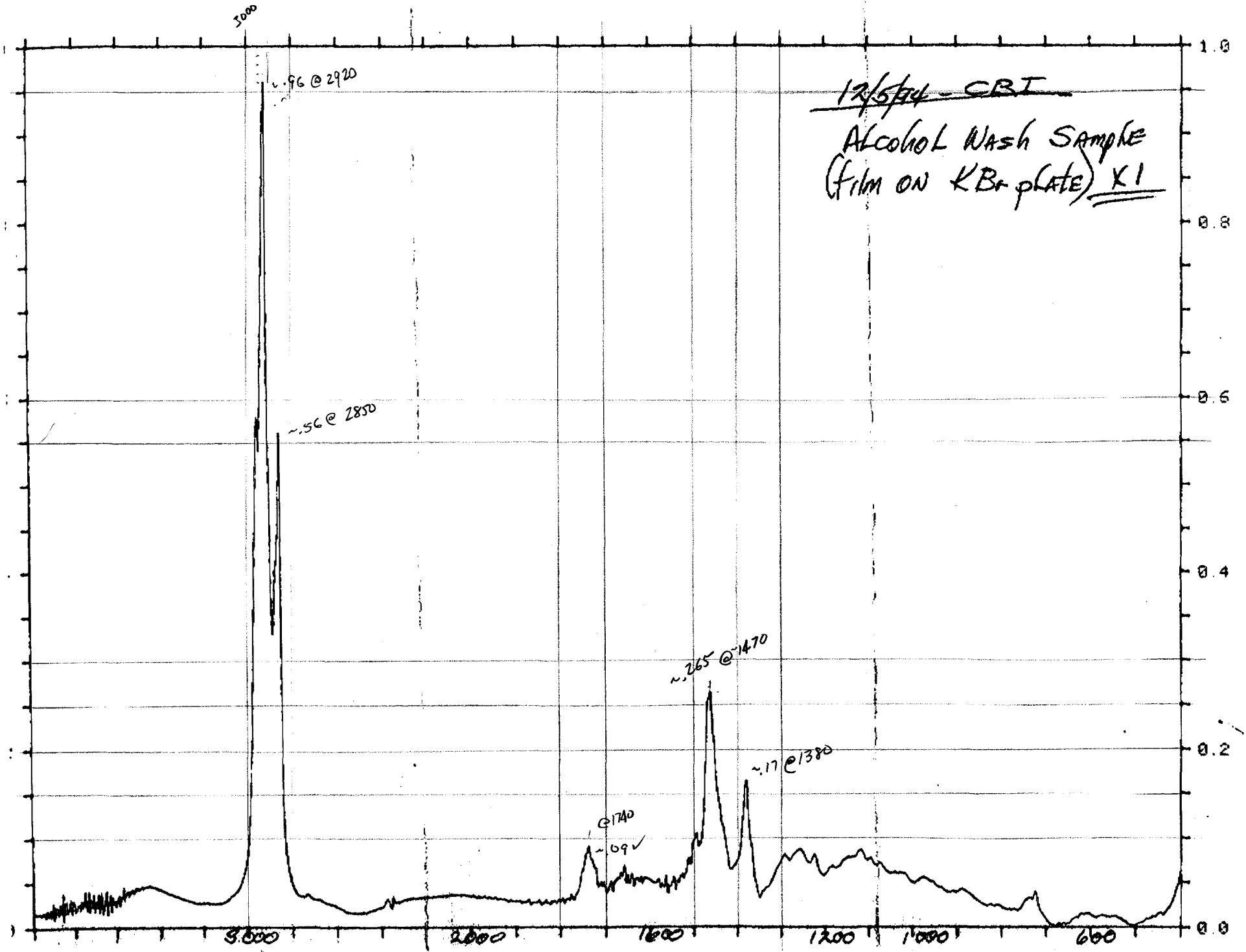
The solvent was found to contain 21. mg/l (26 ppm) of non-volatile matter which is identified as predominantly a hydrocarbon oil or grease.

Non-Volatile Content of the Alcohol Rinse.

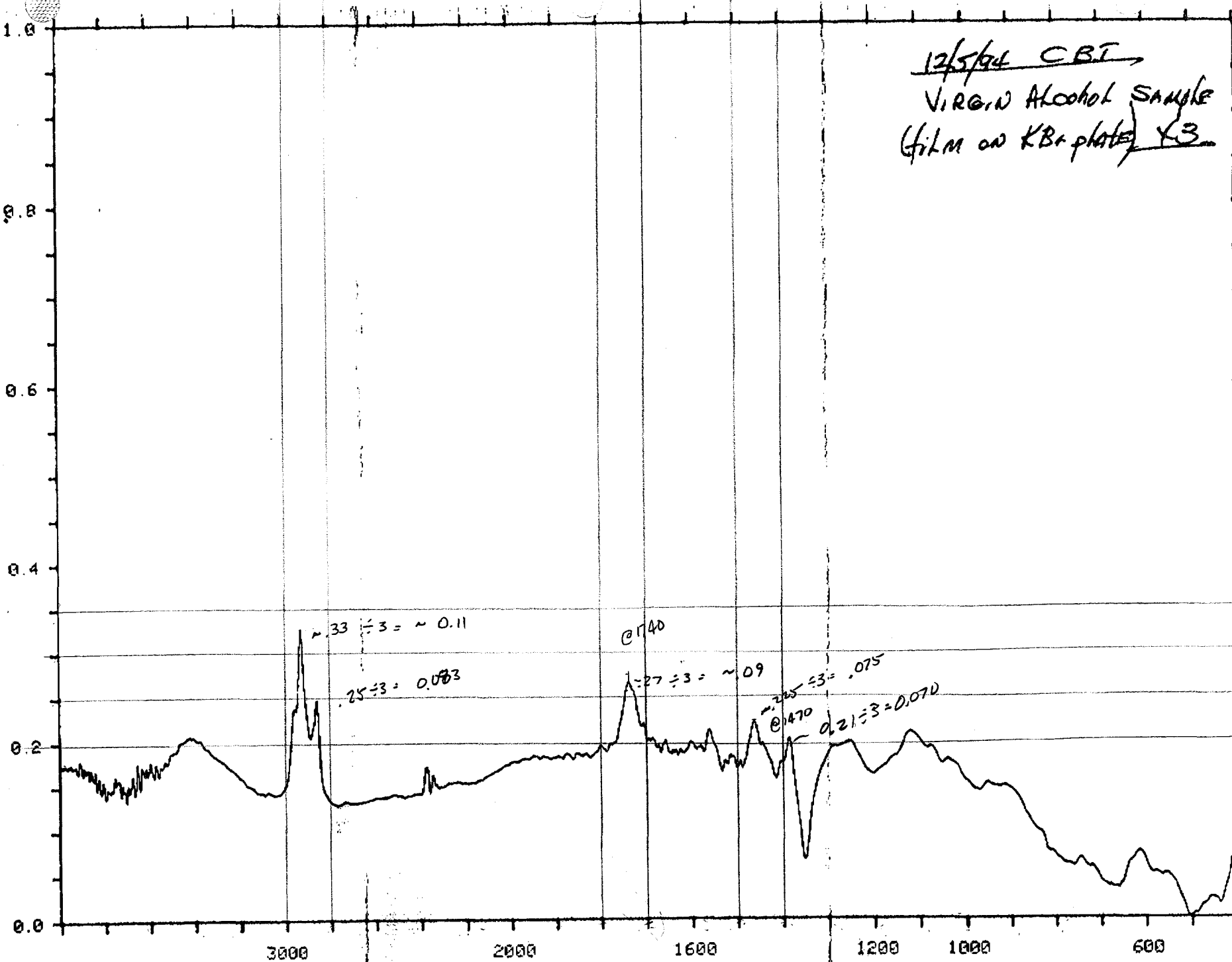
This solution contained 58. mg/l (72.5 ppm) of non-volatile matter. The non-volatiles here are identified as predominantly a hydrocarbon oil or grease and also contain a smaller amount of an ester oil.

Non-Volatile Content of the Alcohol Wash.

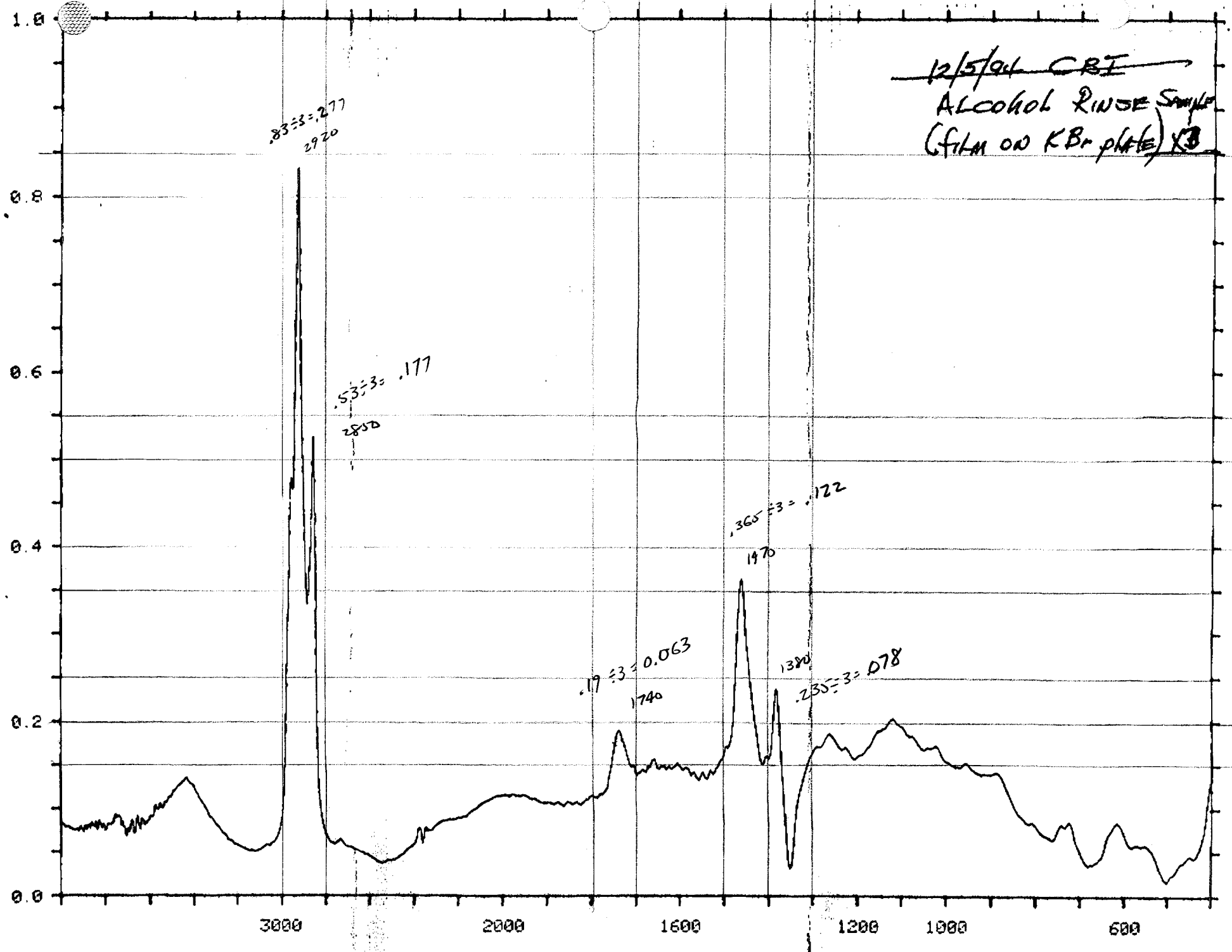
This solution contained 168 mg/l (210 ppm) of non-volatiles. These appeared to be the same general composition as the rinse solution and are identified as predominantly a hydrocarbon oil or grease with a smaller amount of an ester oil.



12/5/94 - CBT
ALCOHOL WASH SAMPLE
(film ON KBr plate) X1

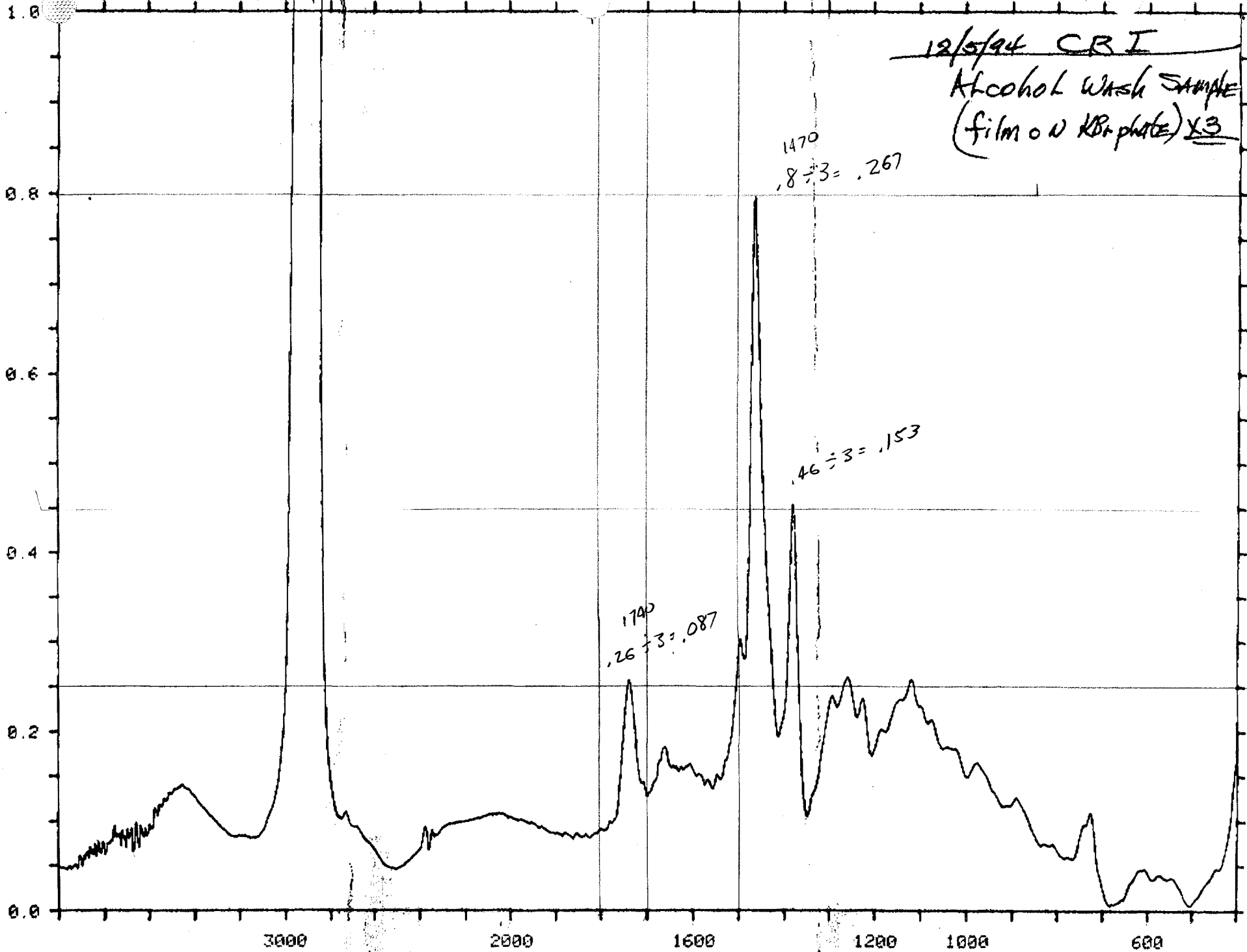


12/5/94 CBI
 VIRGIN ALCOHOL SAMPLE
 (film on KBr plate) X3

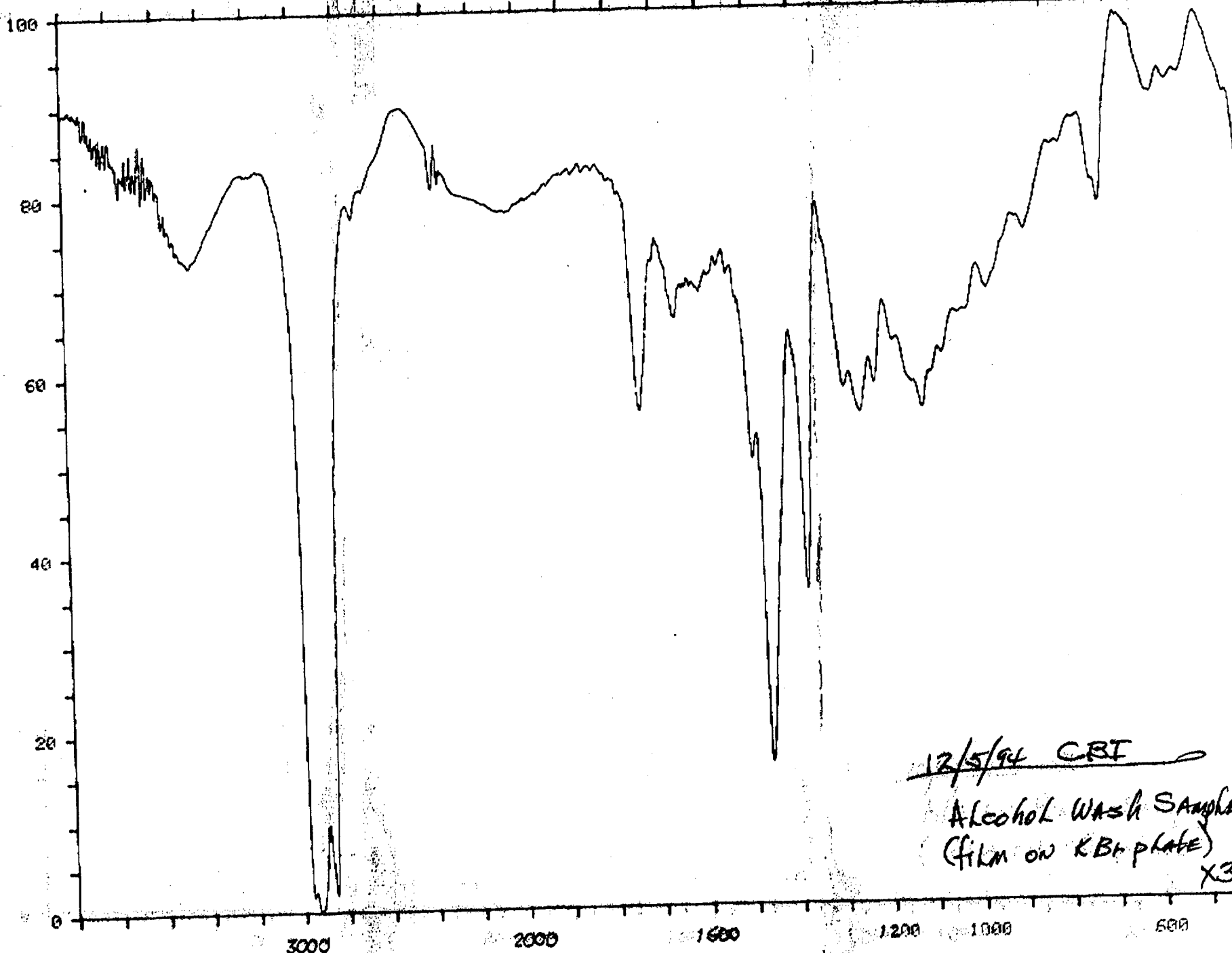


~~12/5/94 CBI~~
 ALCOHOL RINSE SAMPLE
 (FILM ON KBr plate) X3

DEC 15 '94 13:09 FR CBITSCO-PLAINFIELD 815 436 8345 TO 181830049834 P.05/08



12/5/94 CBI
 Alcohol Wash Sample
 (film on KBr plate) x3



12/5/94 CBI
Alcohol Wash Sample
(film on KBr plate)
X3

100

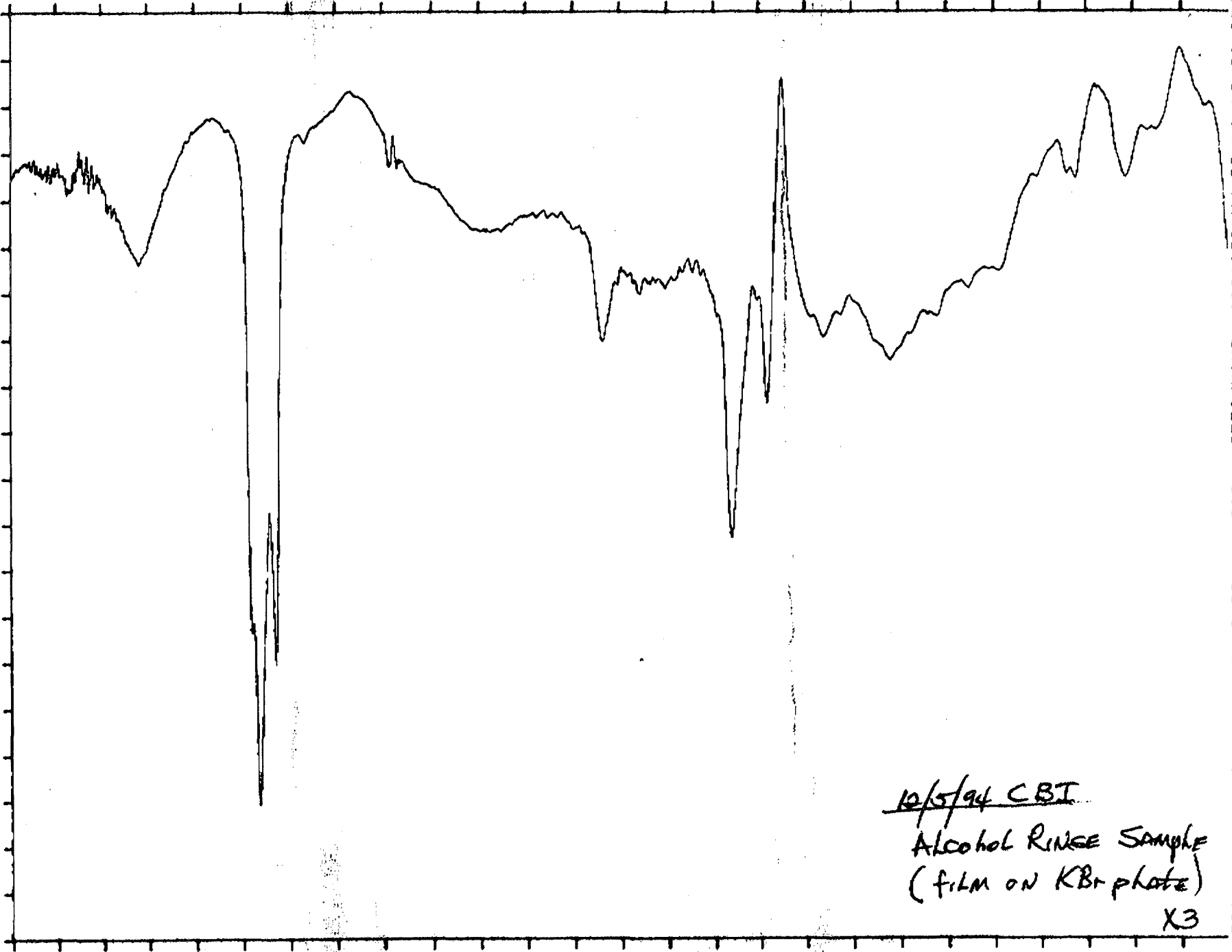
80

60

40

20

0



3000

2000

1600

1200

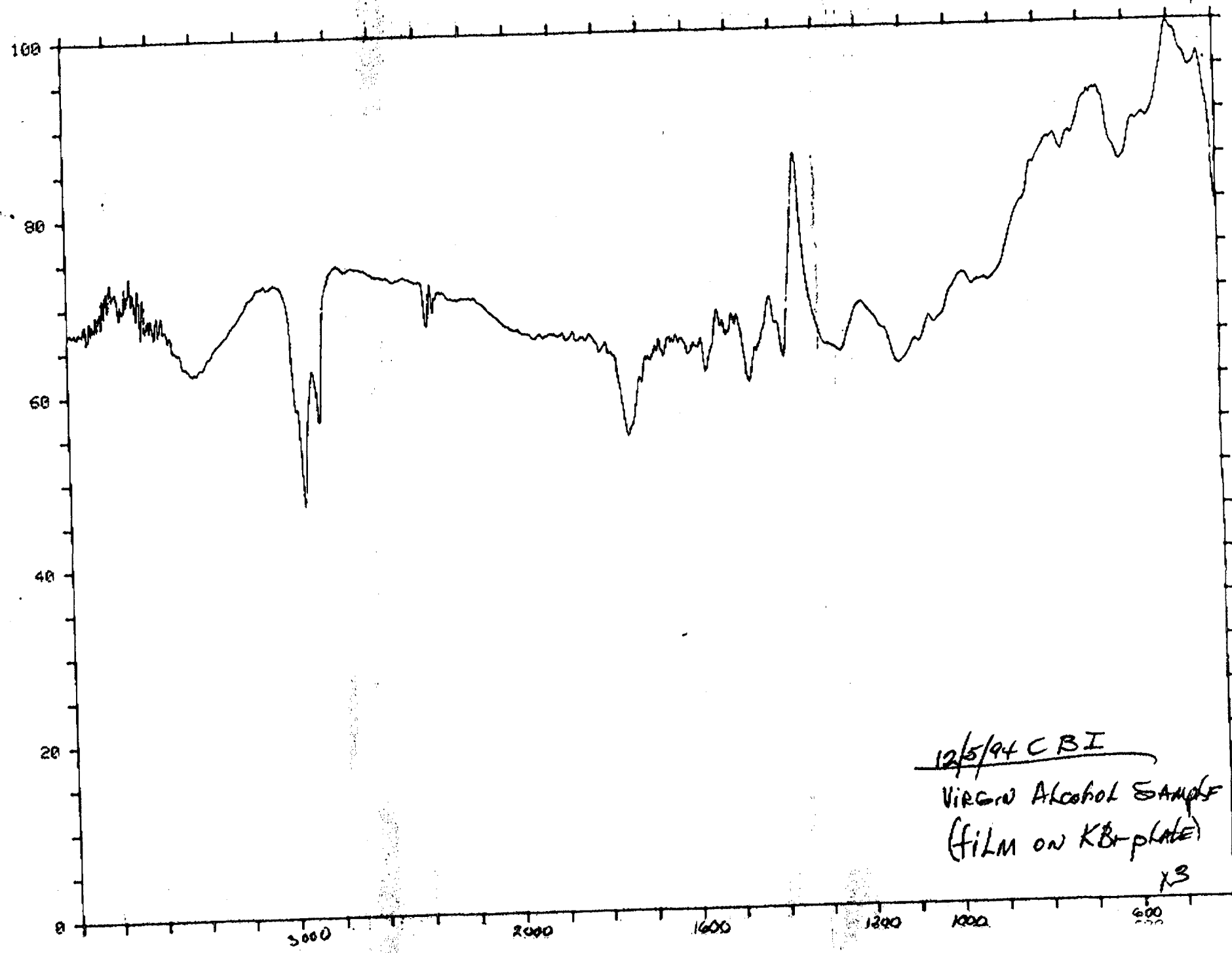
1000

600

12/5/94 CBI
 Alcohol Rinse Sample
 (film on KBr plate)
 X3

DL 15'94 14:53 FR CBITSCO-PLAINFIELD 815 436 8345 TO 18183049834

P.02/03



12/5/94 CBI
Virgin Alcohol Sample
(film on KBr plate)
13