

New Folder Name FTIR Measurements

LIGO  **PROJECT**
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA 91125

FACSIMILE COVER SHEET

LIGO FAX (818) 304-9834

TELEPHONE CONFIRMATION (818) 395-2966

TO Steve Peters & Marty Tellalian
CBITSC
Rai Weiss, MIT

DATE
FAX NUMBER
OFFICE NUMBER

December 19, 1994

NUMBER OF PAGES (including this cover sheet): 6

FROM Larry K. Jones
California Institute of Technology
102-33 Bridge Laboratory
Pasadena, CA 91125

OFFICE NUMBER (818) 395-2970

This is the best I've been able to do with the QT FTIR data. My biggest problem is how to understand Tube 22A data in Fig. 3; it looks like post detergent and post solvent samples may have additional contamination from some source. Any ideas? It's worth a call to Fitzsimmons to confirm his identification (assuming that he's got something to cross check with).

Steve, please let me know if Rai left before he got a copy of this and I'll send him a separate one at MIT. Thanks.

Jones
12-19-94

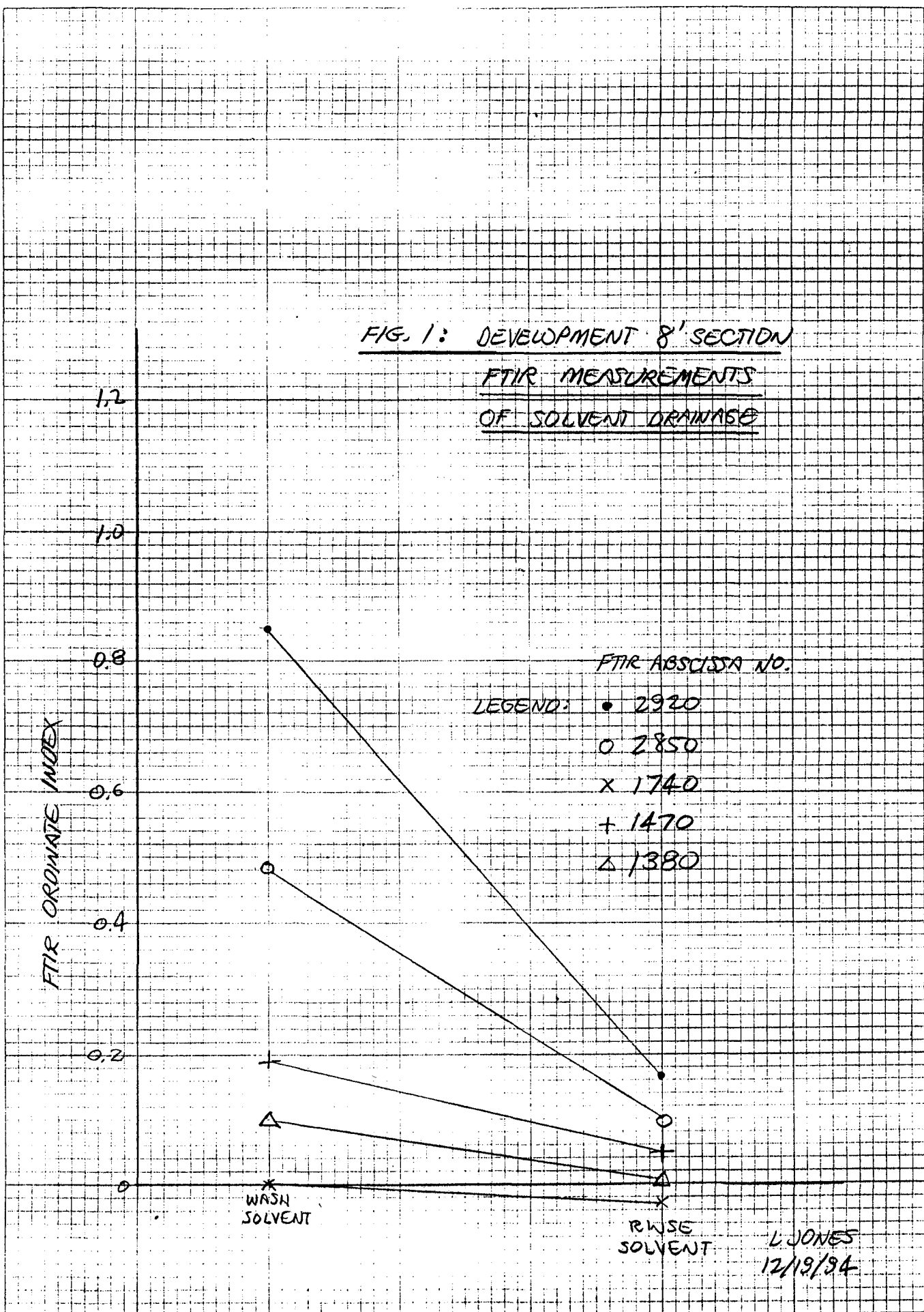
FTIR MEASUREMENTS OF SOLVENT DRAINAGE

	FTIR ORDINATE INDEX	FTIR ABSCISSA NO.				
		2920	2850	1740	1470	1380
	<u>DEVELOPMENT 8' SECTION</u>					
PWT FIG. 1	CLEANING CONTROL SAMPLE	0.11	0.08	0.09	0.08	0.07
	WASH	0.96	0.56	0.09	0.27	0.17
	WASH (NORMALIZED)	0.85	0.48	0.00	0.19	0.10
	RINSE	0.28	0.18	0.06	0.12	0.08
	RINSE (NORMALIZED)	0.27	0.10	-0.03	0.04	0.01
	<u>TUBE 22A</u>					
PWT FIG. 2	CLEANING CONTROL SAMPLE	0.26	0.18	0.09	0.09	0.06
	WASH	3.40	2.60	0.55	1.85	1.05
	WASH (NORMALIZED)	3.14	2.42	0.46	1.76	0.99
	RINSE	1.42	1.08	0.06	0.56	0.34
	RINSE (NORMALIZED)	1.16	0.90	-0.03	0.47	0.28
	<u>TUBE 22B</u>					
PWT FIG. 2	* CLEANING CONTROL SAMPLE	0.26	0.18	0.09	0.09	0.06
	WASH	4.15	3.85	0.50	2.15	1.35
	WASH (NORMALIZED)	3.89	3.67	0.41	2.06	1.29
	RINSE	3.14	2.14	0.12	0.90	0.48
	RINSE (NORMALIZED)	2.88	1.96	0.03	0.81	0.42
* NOTE: SEPARATE CONTROL WAS NOT SUPPLIED - USED 22A CONTROL DATA						

FTIR MEASUREMENTS OF CLEANING EFFECTIVENESS

FTIR ORDINATE INDEX		FTIR ABSOLISSA NO.				
		2920	2850	1740	1470	1380
<u>TUBE 22A</u>						
PLOT FIG. 3	MEAS. CONTROL SAMPLE	0.26	0.18	0.03	0.09	0.06
	1A, PRE CLEAN	1.12	0.68	0.29	0.32	0.21
	1A (NORMALIZED)	0.86	0.50	0.26	0.23	0.15
	2A, POST DETERGENT	1.57	0.95	0.21	0.38	0.22
	2A (NORMALIZED)	1.31	0.77	0.18	0.29	0.16
	3A, POST STEAM	0.73	0.59	0.08	0.20	0.11
	3A (NORMALIZED)	0.47	0.41	0.05	0.11	0.05
4A, POST ALCOHOL	~1.36	1.23	0.18	0.72	0.39	
4A (NORMALIZED)	~1.10	1.05	0.15	0.63	0.33	
<u>TUBE 22B</u>						
NOT PLOTTED	MEAS. CONTROL SAMPLE	0.57	0.39	0.03	0.18	0.09
	1A, PRE CLEAN	0.94	0.68	0.21	0.32	0.22
	1A (NORMALIZED)	0.37	0.29	0.18	0.14	0.13
	2A, POST DETERGENT	0.85	0.57	0.05	0.19	0.10
	2A (NORMALIZED)	0.28	0.18	0.02	0.01	0.01
	3A, POST STEAM	0.45	0.31	0.05	0.14	0.09
	* 3A (NORMALIZED)	-0.12	-0.08	0.02	-0.04	0.00
4A, POST SOLVENT	0.33	0.25	0.05	0.13	0.08	
* 4A (NORMALIZED)	-0.24	-0.14	0.02	-0.05	-0.01	
<u>TUBE 22B</u>						
PLOT FIG. 3	** MEAS CONTROL SAMPLE	0.26	0.18	0.03	0.09	0.06
	1A (NORMALIZED)	0.68	0.50	0.18	0.23	0.16
	2A "	0.59	0.39	0.02	0.10	0.04
	3A "	0.19	0.13	0.02	0.05	0.03
	4A "	0.07	0.07	0.02	0.04	0.02
* DATA SUSPECT - PROBABLY UNREPRESENTATIVE CONTROL SAMPLE						
** DATA FROM 22A MEAS. CONTROL SAMPLE USED FOR 22B NORMALIZATION						

FIG. 1: DEVELOPMENT 8' SECTION
FTIR MEASUREMENTS
OF SOLVENT DRAINAGE



FTIR ABSISSA NO.

LEGEND:

- 2920
- 2850
- x 1740
- + 1470
- △ 1380

FTIR ORIGINATE INDEX

x
WASH
SOLVENT

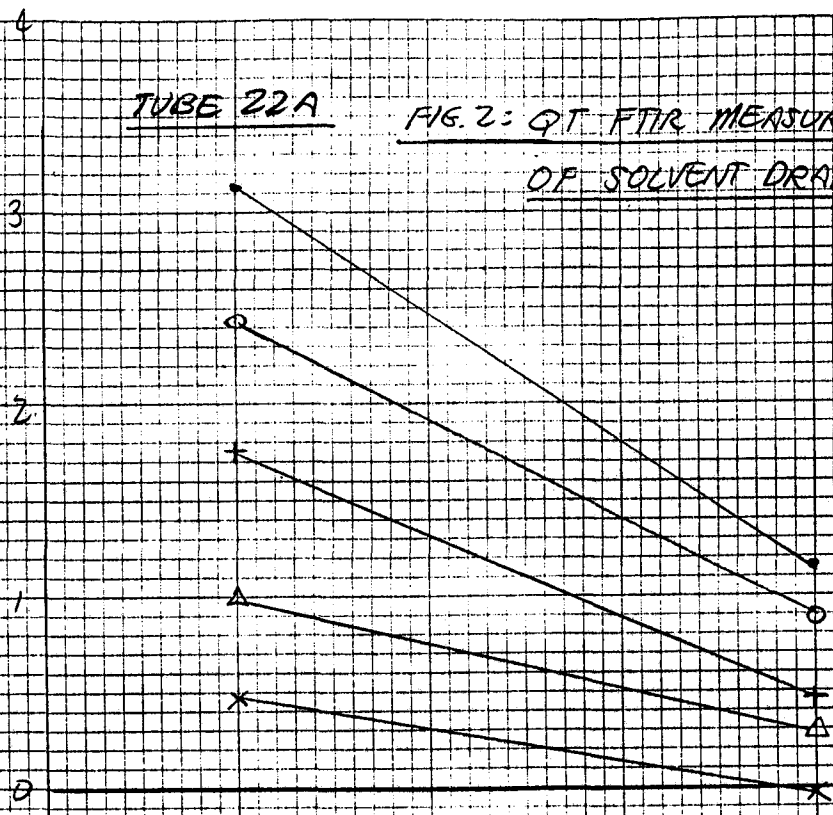
x
RWSE
SOLVENT

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TUBE 22A

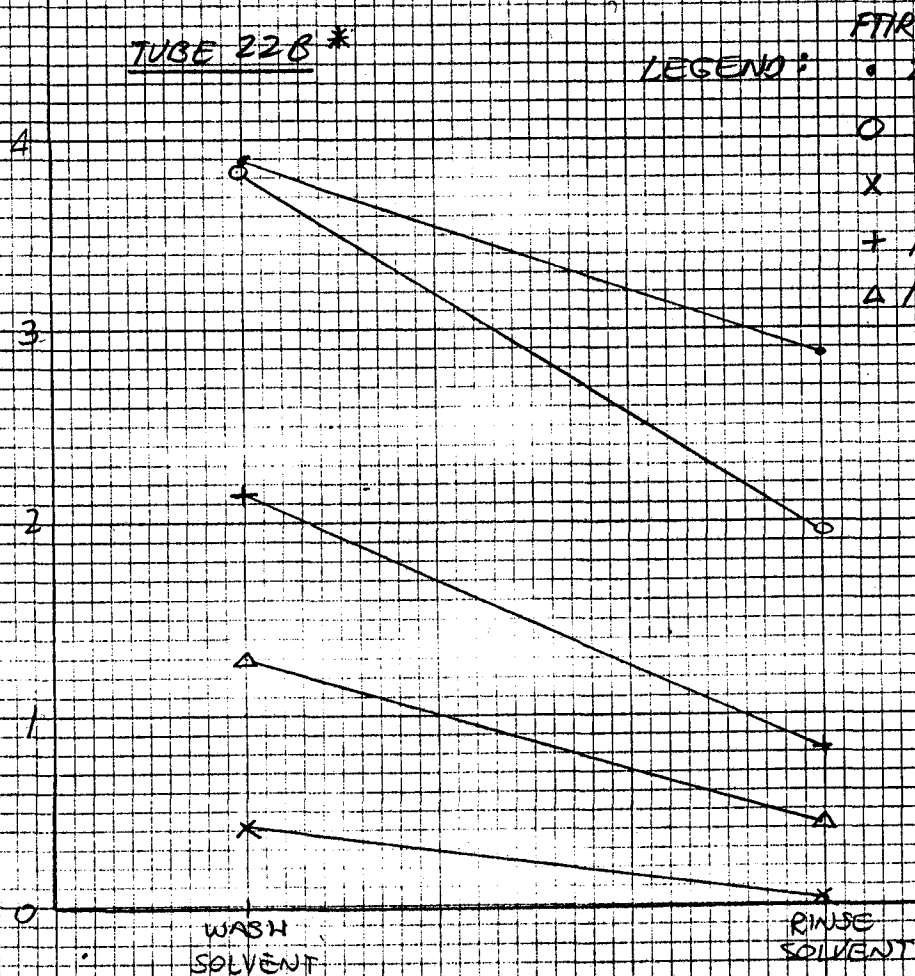
FIG. 2: QT FTIR MEASUREMENTS
OF SOLVENT DRAINAGE

FTIR DRAINAGE INDEX



TUBE 22B*

LEGEND: FTIR ABSCISSA NO.
 • 2920
 ○ 2850
 x 1740
 + 1470
 Δ 1380



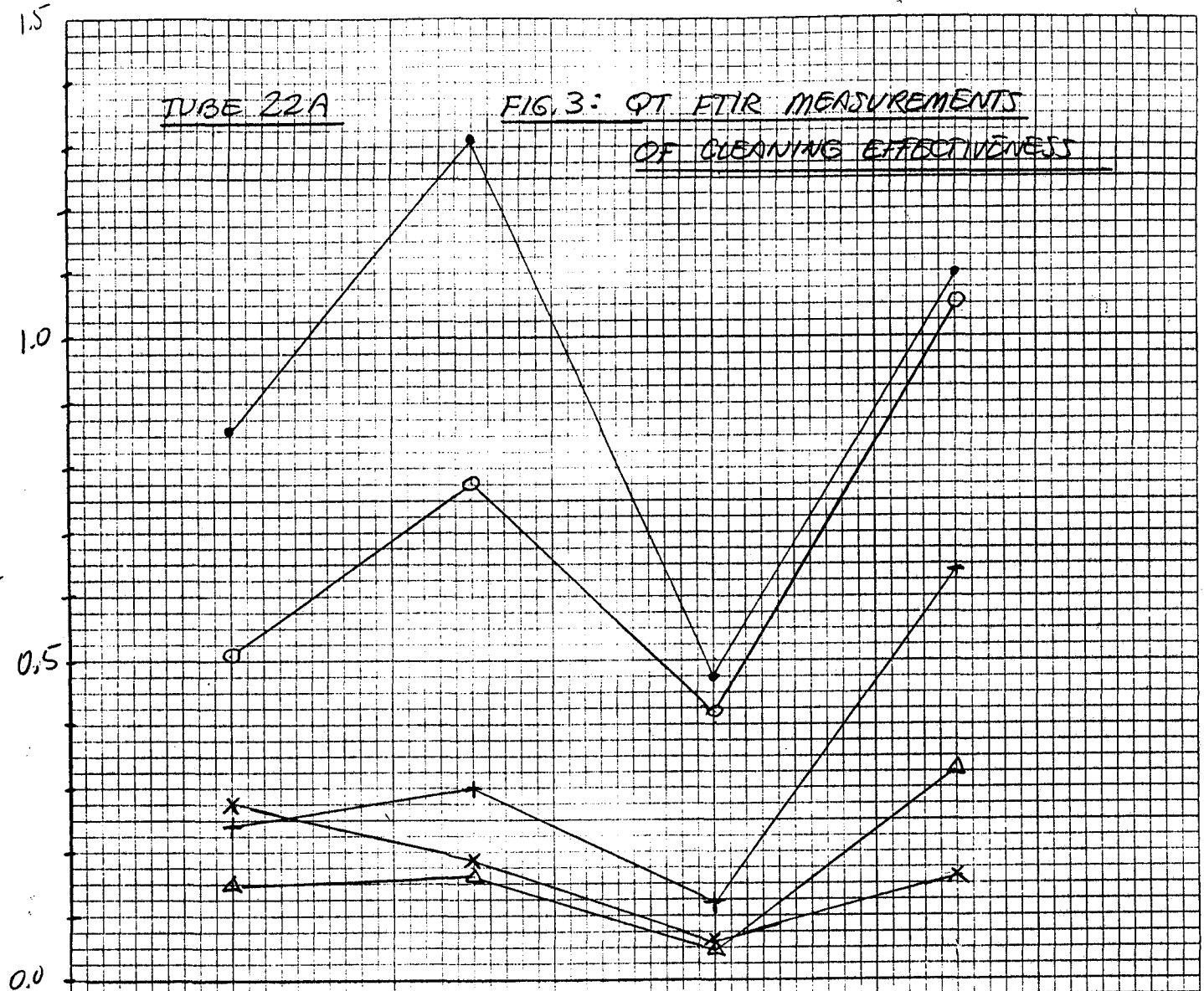
L. JONES
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* NOTE: DATA FROM CLEANING CONTROL SAMPLE (VIRGIN SOLVENT) FROM CLEANING OF TUBE 22A WAS USED FOR 22B NORMALIZATION, AS NO OTHER WAS AVAILABLE.

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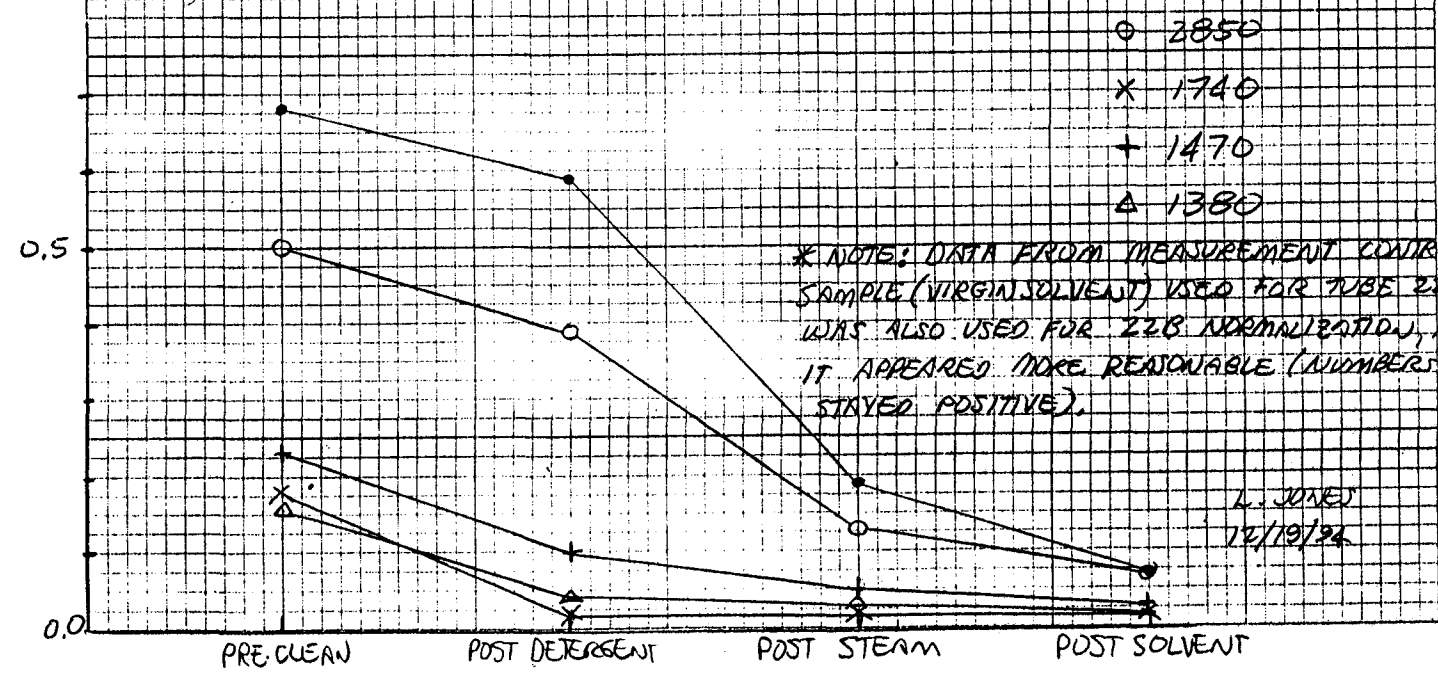
TUBE 22A

FIG. 3: QT FTIR MEASUREMENTS OF CLEANING EFFECTIVENESS



TUBE 22B*

FTIR ABSCISSA NO.
 LEGEND: ● 2920
 ○ 2850
 x 1740
 + 1470
 Δ 1380



* NOTE: DATA FROM MEASUREMENT CONTROL SAMPLE (VIRGIN SOLVENT) USED FOR TUBE 22A WAS ALSO USED FOR 22B NORMALIZATION, AS IT APPEARED MORE REASONABLE (NUMBERS STAYED POSITIVE).

L. JONES
 12/19/94