

C-1

HYDRAULICS DIVISION
TECHNICAL NOTE

DATE: February 1983 REPORT NO: 83-06

TITLE: Particle Size Data and X-Ray Diffraction Report, Yukon Lakes

AUTHOR: G. A. Duncan

REASON FOR REPORT: This report responds to a request for particle size data and X-ray diffraction analysis from Chris Pharo, NWRI, Pacific and Yukon.

CORRESPONDENCE FILE NO:
5105 (Study No. 310)

1.0 INTRODUCTION

This report responds to a request for grain size analysis and X-ray diffraction determination on two samples from lakes in southern Yukon.

One sample, Leberge Station A, was subsampled and daily analyses run to determine if the sample changed with time. Two subsamples from the second sample, LE 27B, were obtained and analysed to check for flocculation.

Both samples were analysed on the X-ray diffraction to check if their composition caused the problems encountered with the samples.

2.0 PROCEDURE

1. The Sieve and Sedigraph Method which provides sand, silt and clay percentages was used to analyse the samples (Duncan & LaHaie, 1979).

Briefly the procedure consists of:

1. Splitting the sample to 2g.
2. Removing particles large enough to block Sedigraph Suction Tube (0.088 mm).
3. Dispensing sample in a Calgon suspension.
4. Automatic analysis with the Sedigraph.
5. Processing the results with SIZDIST: a FORTRAN IV computer program (Sandilands and Duncan, 1980).

2. X-Ray diffraction

The samples, analysed "as received" were powder-pressed into the groove of the glass holder, covered with a glass cover slide and analysed using a Philips PW 4025 X-ray diffractometer.

3.0 RESULTS

- (1) For the Sieve and Sedigraph Method, the output consists of:
1. A histogram of the frequency distribution.
 2. The percentage and cumulative percentages of the material occurring within each 1/2 PHI unit.
 3. Moment measure statistics (Krumbein & Pettijohn, 1938) and graphic (Folk and Ward, 1957) statistics.
 4. Percentiles.
 5. Percent gravel, sand, silt and clay.
 6. Ratios used to plot Folk's Ternary Classification.
 7. Shepard (1954) and Folk (1974) Ternary Classifications.

(2) X-Ray Diffraction

The interpretation of the X-ray diffractograms and the responsibility of the scientist submitting the samples (Griffin, 1971).

It appears from the diffractograms (Appendix 2) that nothing out "of the ordinary" is in the samples, although there is an unidentified peak at 10.5° - possible amphibole. There also appears to be an abundance of feldspans and quartz. The diffractograms suggest the parent material to be igneous rock.

4.0 COMMENTS

1. Sample LE 27B - there was no indication of flocculation in the two subsamples analysed.
2. Samples Lebarge 1 and 2 were subsampled, dispersed, mixed and run immediately. The samples were run for nine days (except day 5, a Sunday) and show the samples increasing in the fine range up to days 7, 8 and 9. Samples Lebarge 3 and 4 were allowed to sit in dispersion overnight (our usual procedure) before mixing and analysing. The samples were run for four days and show the samples increasing up to days 3 and 4.

3. One subsample Lebarge 5 was treated with 30% H₂O₂, washed clean by centrifuging, dispersed and analysed on the Sedigraph. The % organic (by this crude method) was 9.22%. The sample slightly increased toward the fines on the second day with the third day the same as the second. No further testing was done.

Included with this report are the particle size distribution graphs from the Sedigraph (Appendix 1), the particle size print-out sheets (Appendix 2) and the X-ray diffractograms (Appendix 3).

REFERENCES

- Duncan, G. A. and LaHaie, G. G., 1979. "Size Analysis Procedures Used in the Sedimentology Laboratory, NWRI". NWRI, CCIW, Hydraulics Division Manual, September 1979.
- Folk, R. L., 1968. "Petrology of Sedimentary Rocks". Hemphill Publishing Co., Austin, Texas 182 p.
- Folk, R. L. and Ward, W. C., 1957. "Brazos River Bar: A Study in the Significance of Grain Size Parameters". Jour. Sed. Petrology, V. 27, pp. 3-26.
- Griffin, George M., 1971. "Interpretation of X-ray Diffraction Data, in Robert E. Carver, Editor, Procedures in Sedimentary Petrology, John Wiley & Sons, New York, 653 p.

APPENDIX 1
Particle Size Distributions
by Sedigraph

PARTICLE SIZE DISTRIBUTION

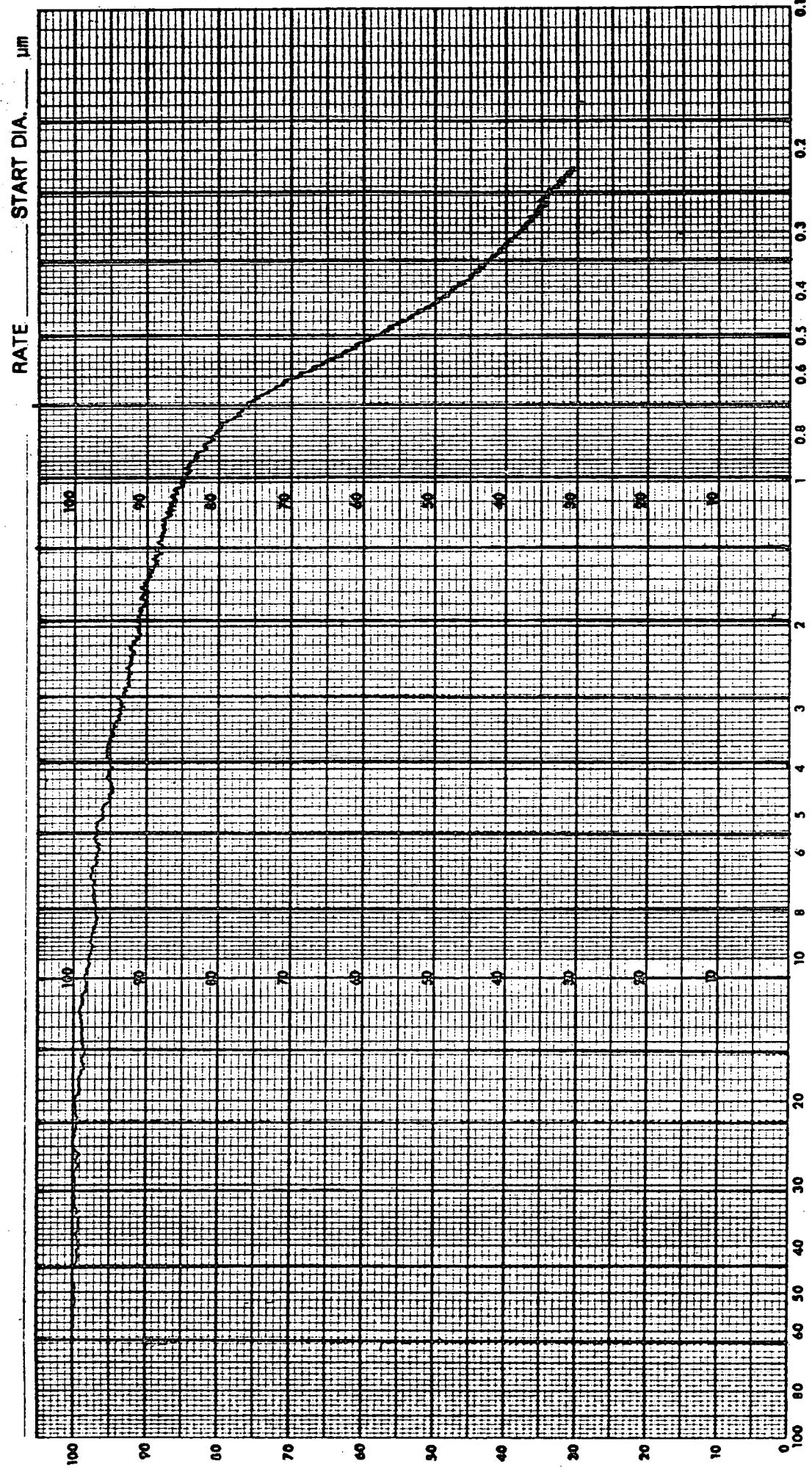
L E 273 /

SAMPLE IDENTIFICATION

Density g/cc LIQUID Preparation

Density g/cc Viscosity cp

DATE 13 Jan
BY TEMPERATURE °C



PARTICLE SIZE DISTRIBUTION

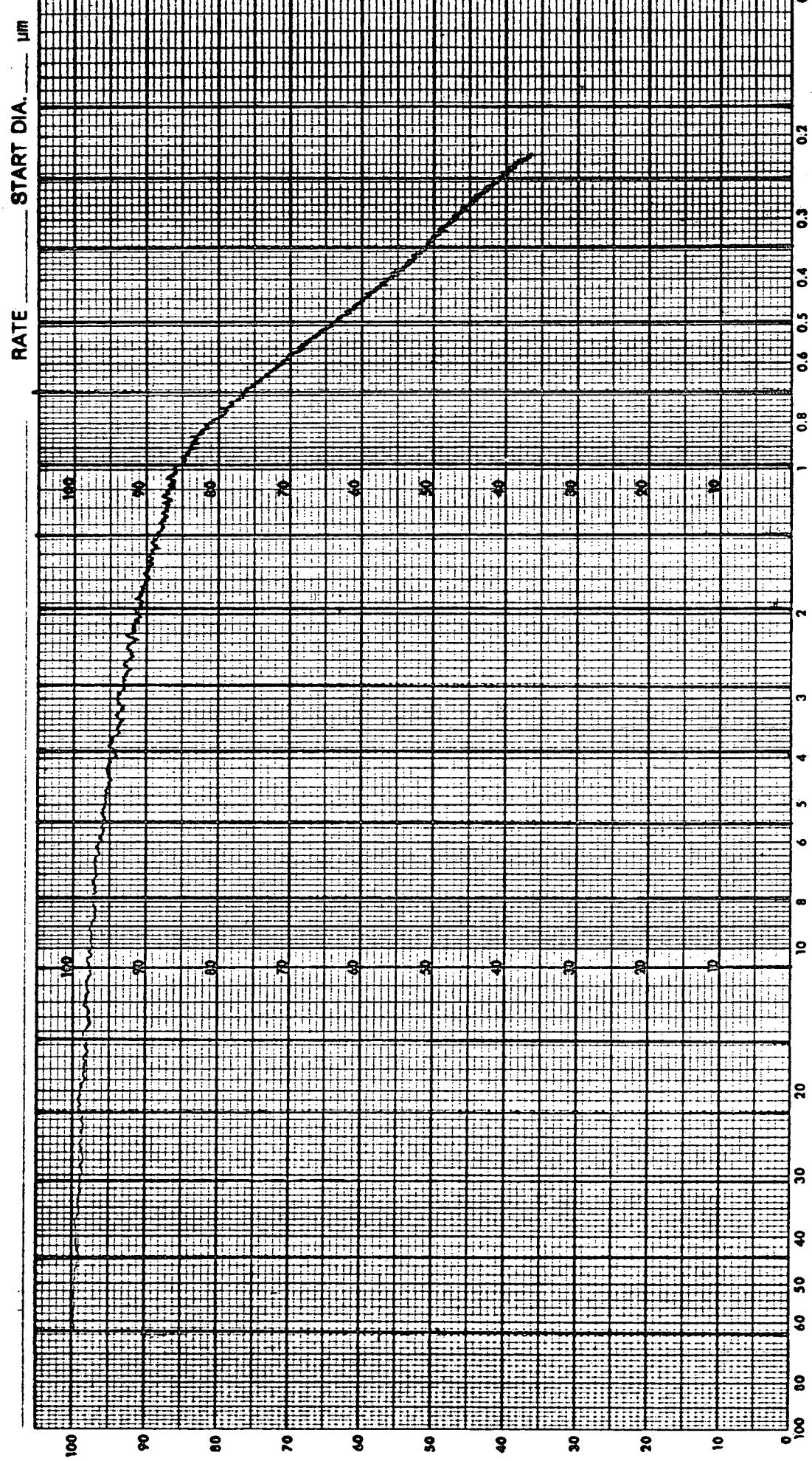
CE 27K S.

SAMPLE IDENTIFICATION

Density 1.2 g/cc LIQUID
Preparation CE 27K S.

DATE 13 Jun

BY _____

TEMPERATURE 25 °C**EQUIVALENT SPHERICAL DIAMETER, μm** 

PARTICLE SIZE DISTRIBUTION

Day 1

DATE 12 Jan.

SAMPLE IDENTIFICATION *Cleaner T*

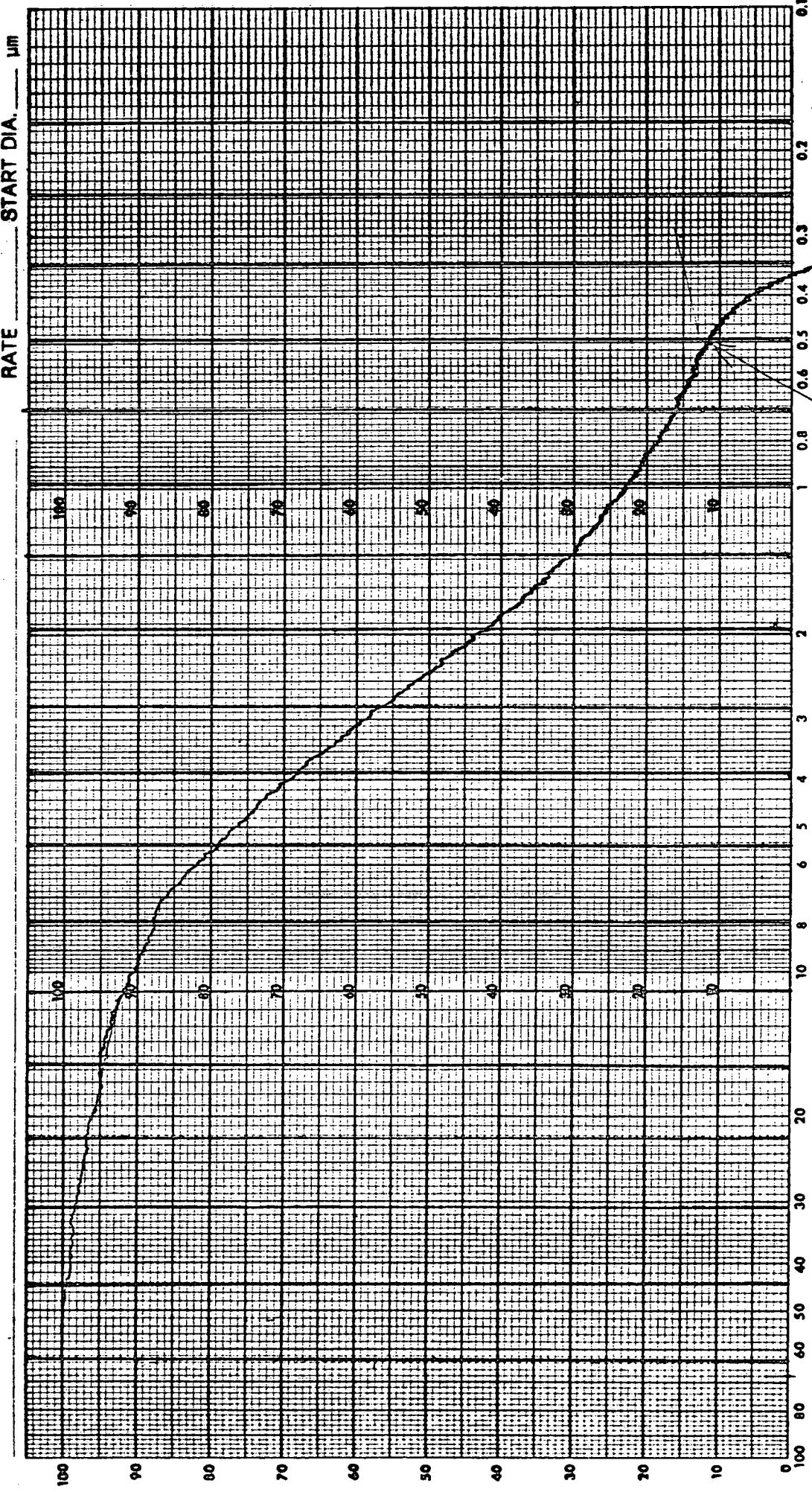
Preparation

Density 1.05 g/cc LIQUID

Density 1.05 g/cc Viscosity 10 cp

Temperature 25 °C

Rate 10 ml/min Start Dia. 0.1 μm



EQUIVALENT SPHERICAL DIAMETER, μm

Air Bubble

micromeritics
instrument corporation
5681 goshen road • norcross, georgia 30071 • u.s.a.
telephone 404/448-8822 • telex 701-7450

PARTICLE SIZE DISTRIBUTION

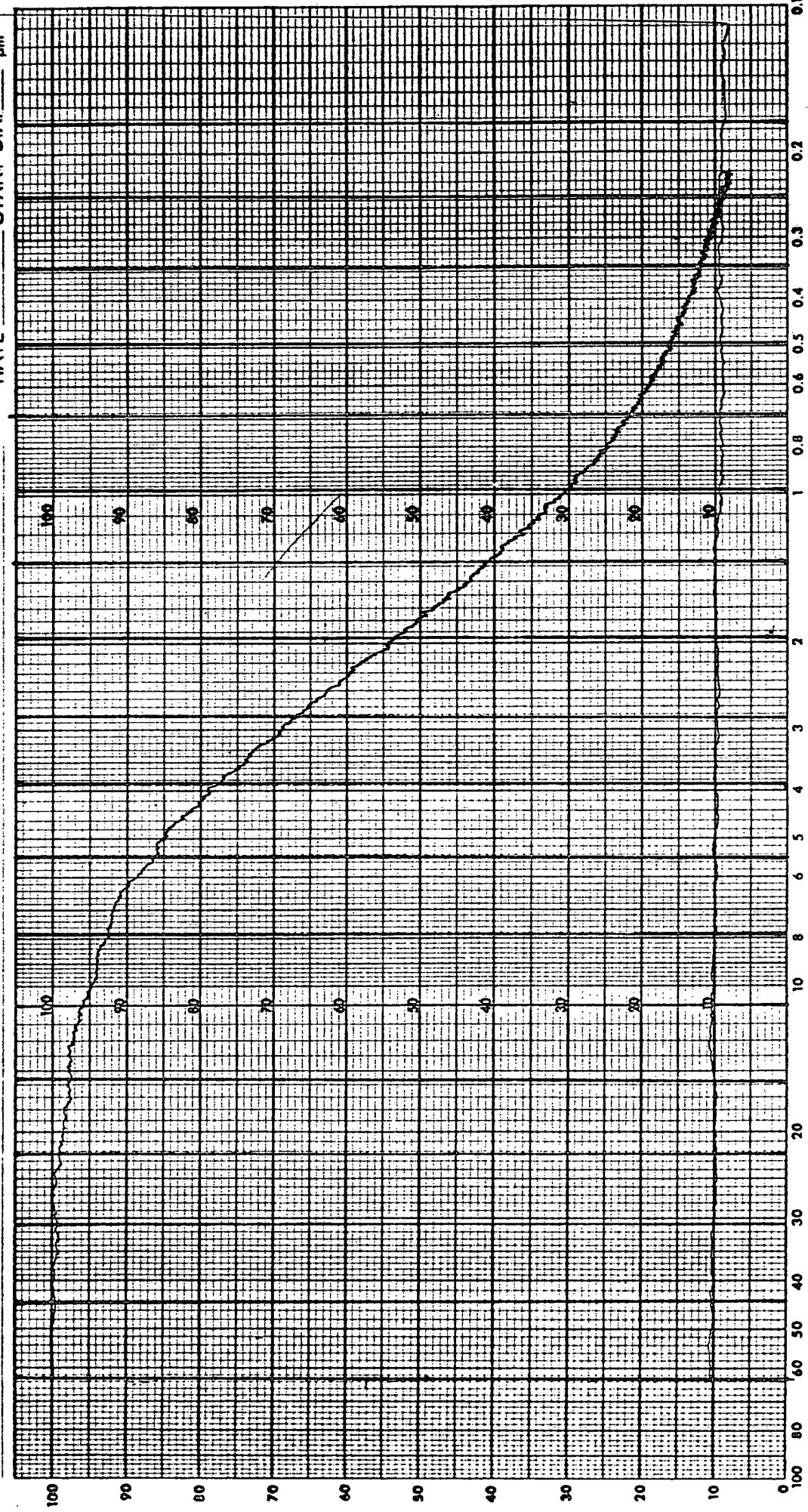
SAMPLE IDENTIFICATION

L-131416 G C / 3

DATE 1/4 Jan

Density g/cc LIQUID

Preparation Density g/cc Viscosity cp TEMPERATURE °C RATE START DIA. μm



EQUIVALENT SPHERICAL DIAMETER, μm

micromeritics®
instrument corporation

5500 Roswell Springs road • Norcross, Georgia 30071 • U.S.A.
Telephone 404/448-8282 • Telex 707450

PARTICLE SIZE DISTRIBUTION

144

1

SAMPLE IDENTIFICATION

LIQUID

Density

Preparation

BY

RATE

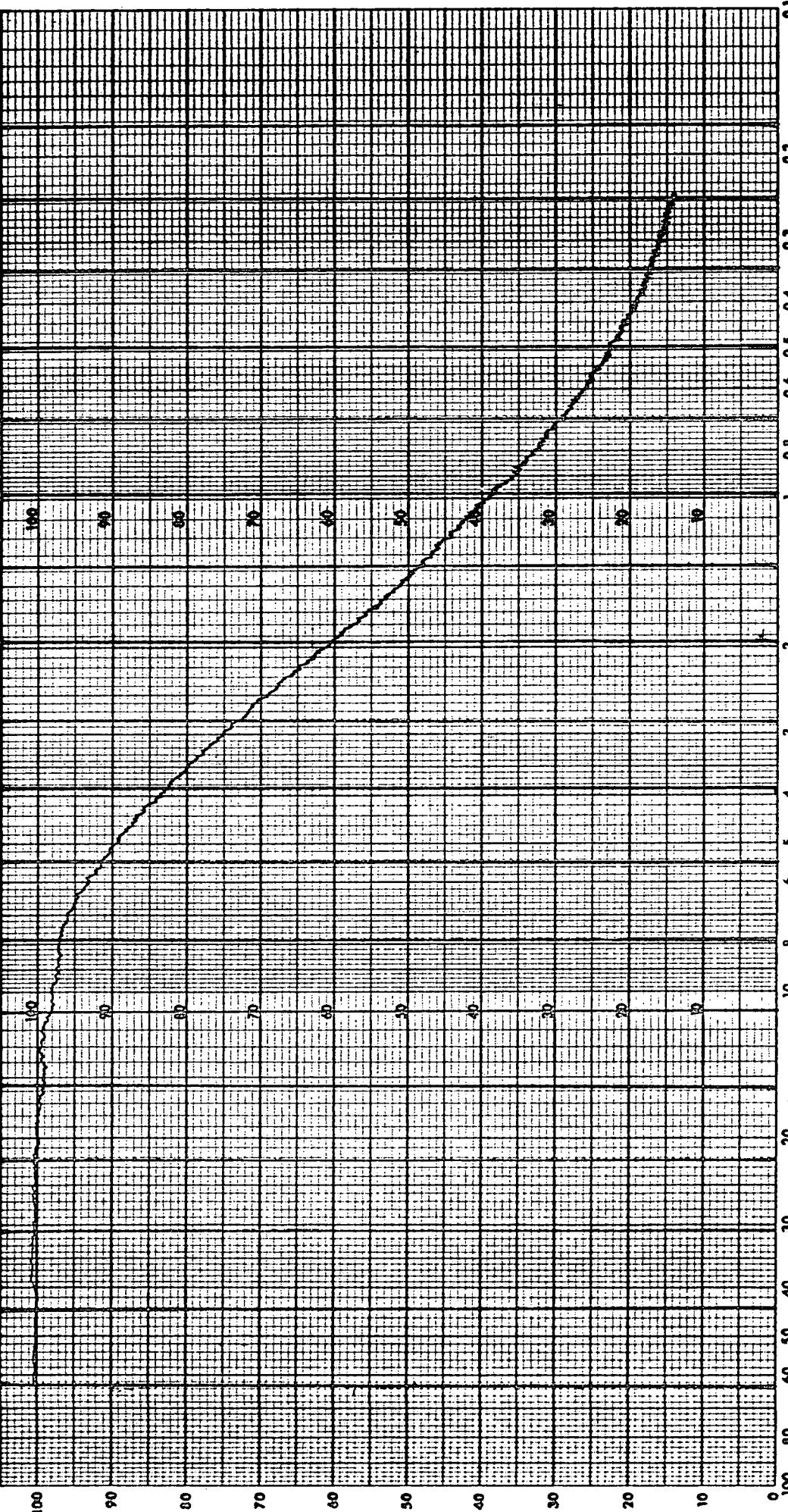
DATE

TEMPERATURE

°C

START DIA.

μm



© Micromeritics Instrument Corporation 1984

micromeritics
Instrument corporation
5680 Quantum Springs Road • Norcross, Georgia 30071 • USA
Telephone: 404/448-8782 • Telex: 7017450

PARTICLE SIZE DISTRIBUTION

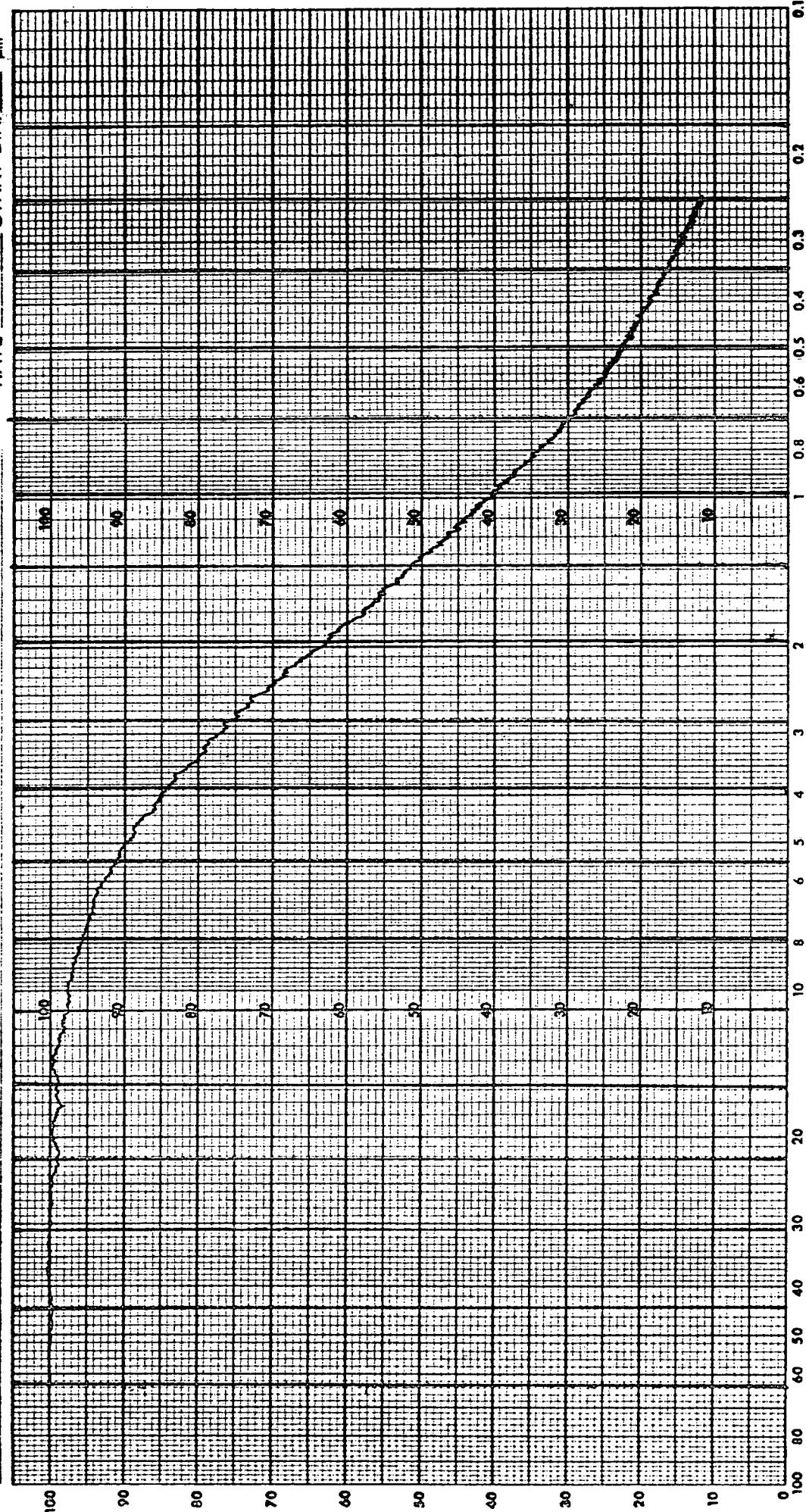
SAMPLE IDENTIFICATION LE BAN G C / DAY 6

DENSITY LIQUID g/cc Density 9 g/cc

Preparation BY

TEMPERATURE °C

RATE 17 Jan START DIA. μm



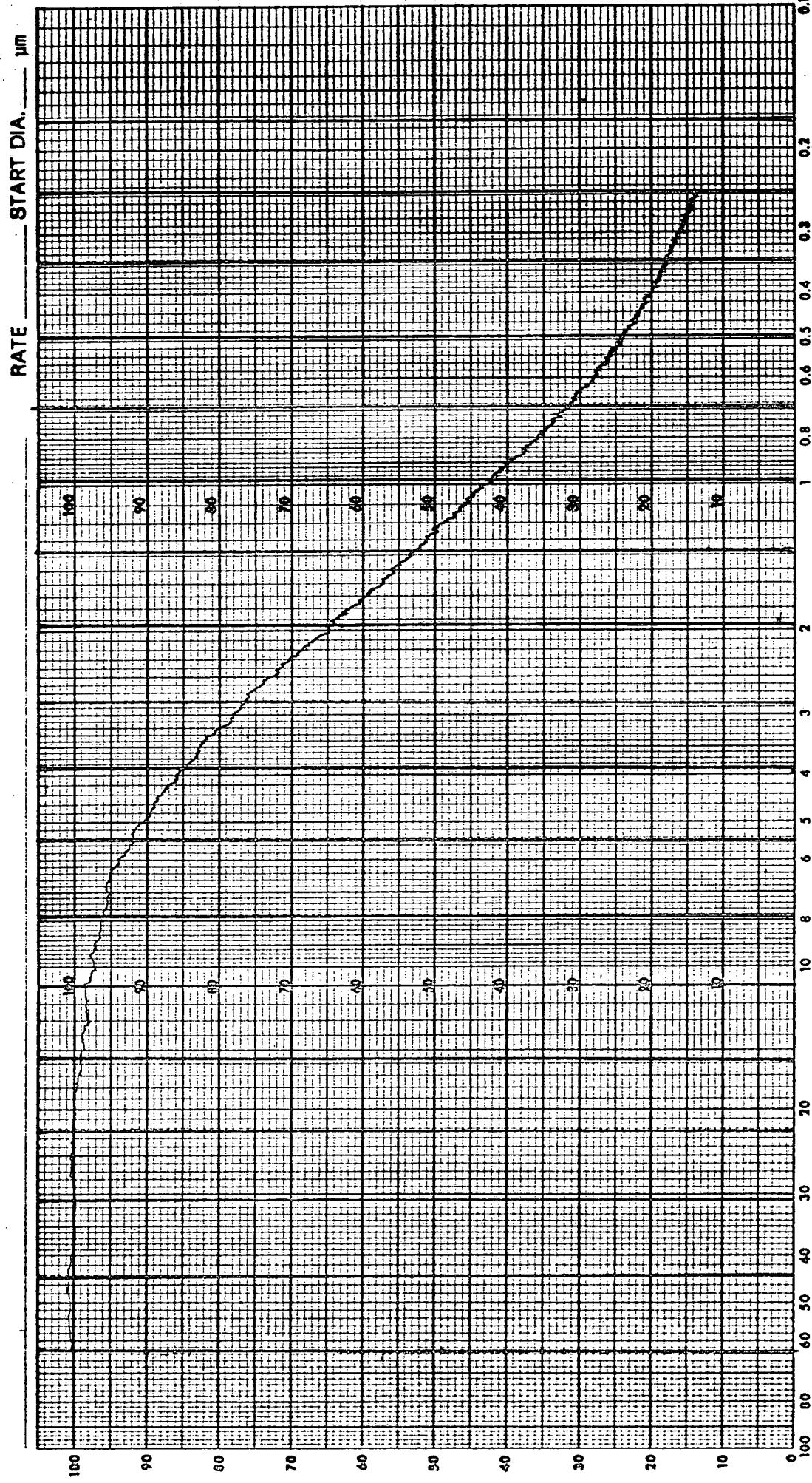
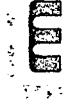
micromeritics®
instrument corporation

5680 jones springs road • encino, california 91311 • usa
telephone 101/4418-8282 • telex 702750
© micromeritics instrument corporation 1981

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION LE BANC C / 204 7

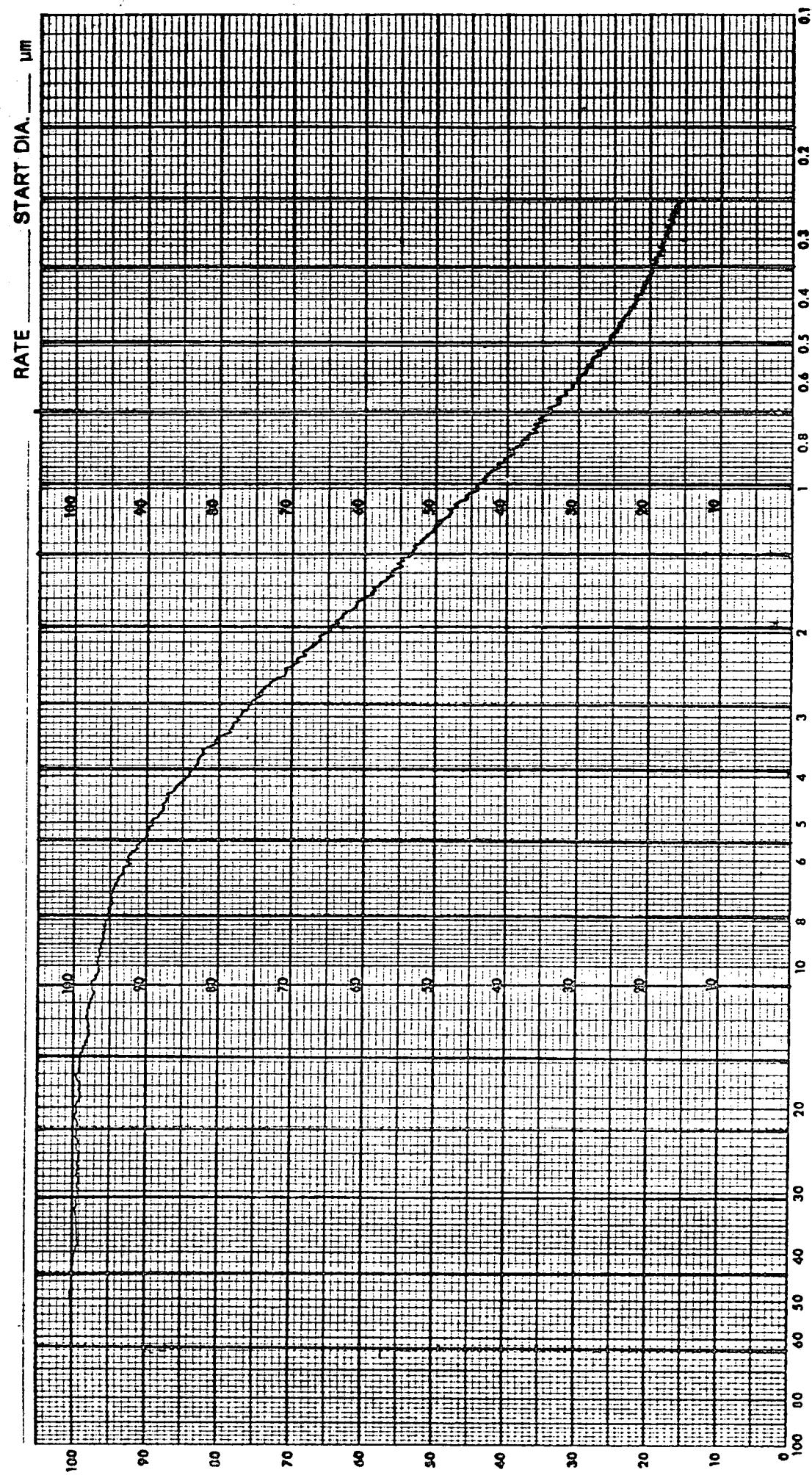
Density g/cc LIQUID Density g/cc Viscosity cp BY
 Preparation TEMPERATURE °C RATE START DIA. µm

EQUIVALENT SPHERICAL DIAMETER, μm 

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION C-131764 / DAY 8
Density 1.02 g/cc LIQUID
Preparation 19 Jan.

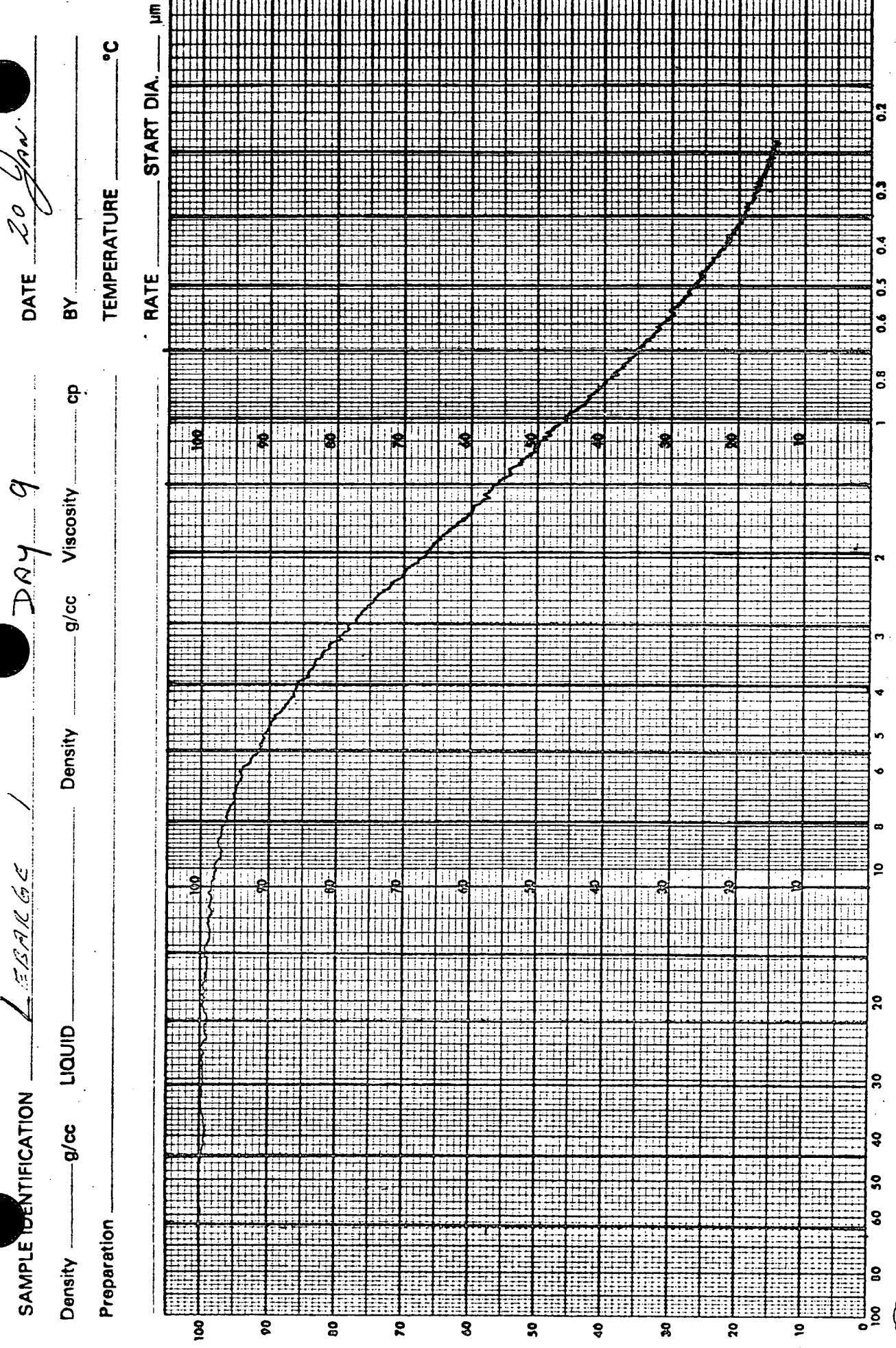
DATE 19 Jan.
RATE _____
TEMPERATURE _____ °C
BY _____



EQUIVALENT SPHERICAL DIAMETER, μm

micromeritics •
Instrument Corporation
5610 Roswell Springs Road • Norcross, Georgia 30071 • USA
Telephone 404/448-8242 • Telex 70-7450

PARTICLE SIZE DISTRIBUTION



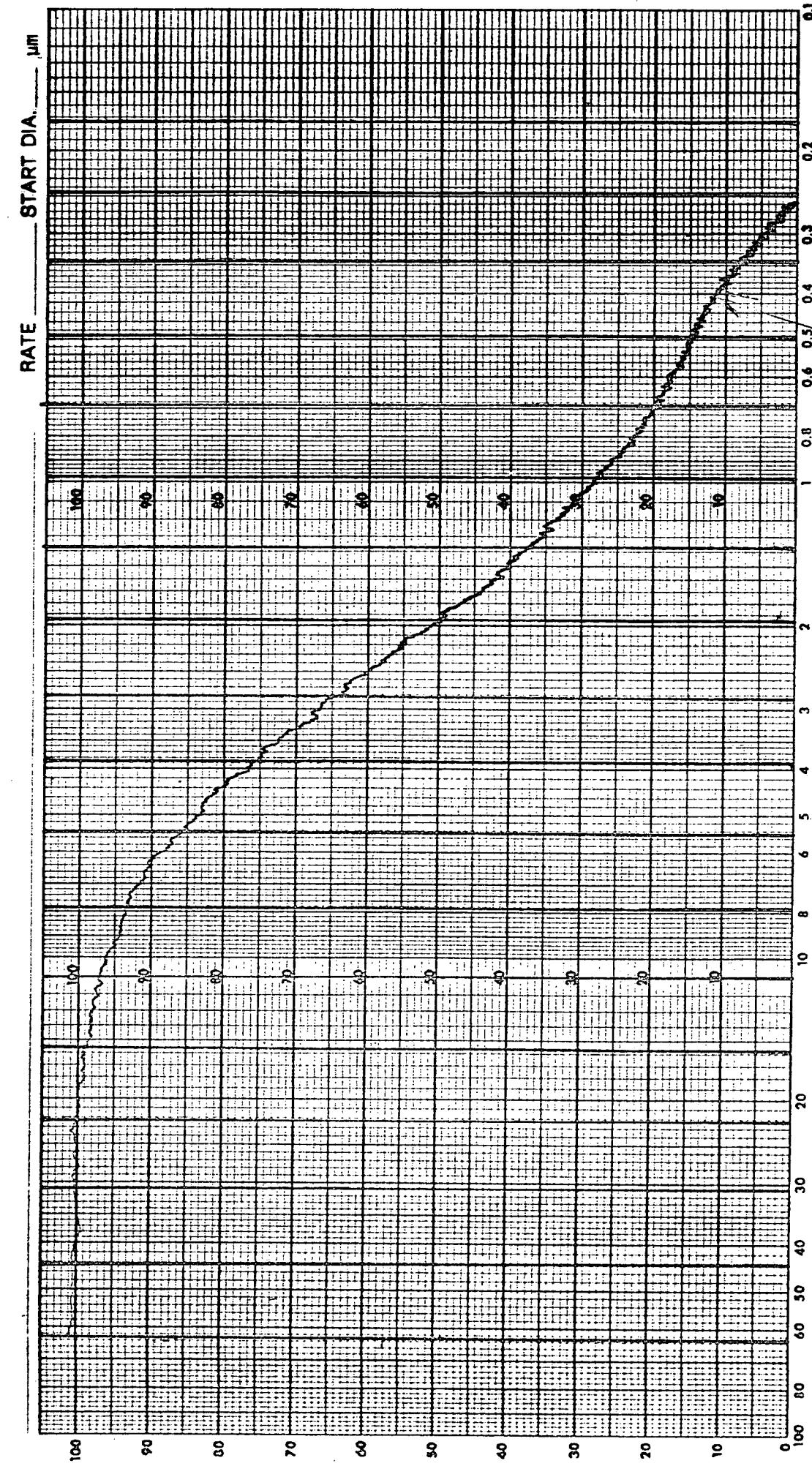
EQUIVALENT SPHERICAL DIAMETER, μm

micromeritics®
instrument corporation
5681 Winton Road • Tenafly, New Jersey 07671 • U.S.A.
Telephone: 401/448-8212 • Telex: 707450

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION C20 n12 Gc 2

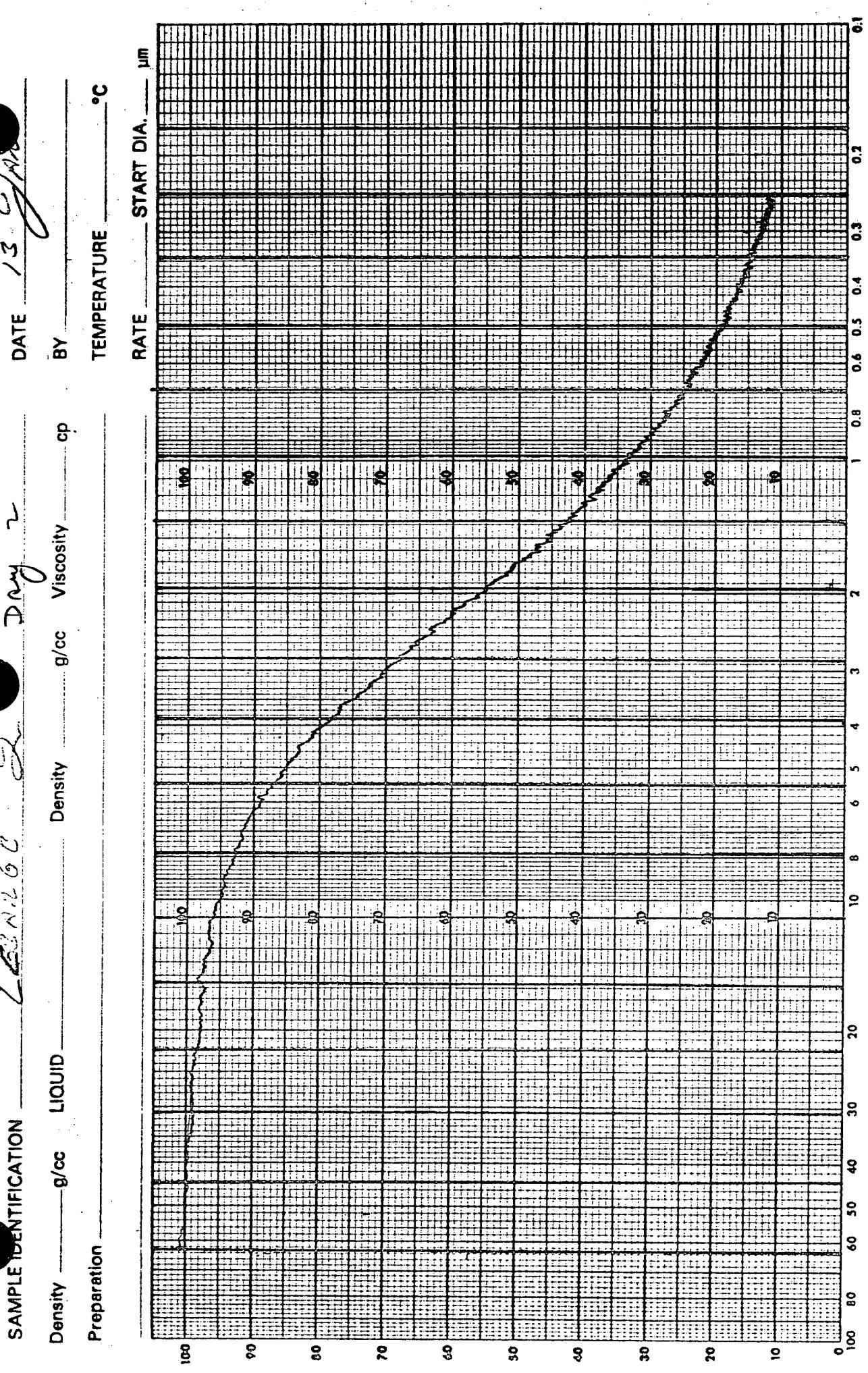
Density 1.2 g/cc LIQUID Preparation DRY 1
 BY TEMPERATURE °C



fin size

EQUIVALENT SPHERICAL DIAMETER, μm

PARTICLE SIZE DISTRIBUTION



© 1970 Micromeritics Instrument Corporation

micromeritics
Instrument Corporation
5630 Johnson Springs Road • Norcross, Georgia 30071 • USA
telephone 404/448-8282 • telex 707450

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION

Day 3
J. J. G.

Density g/cc LIQUID

Preparation

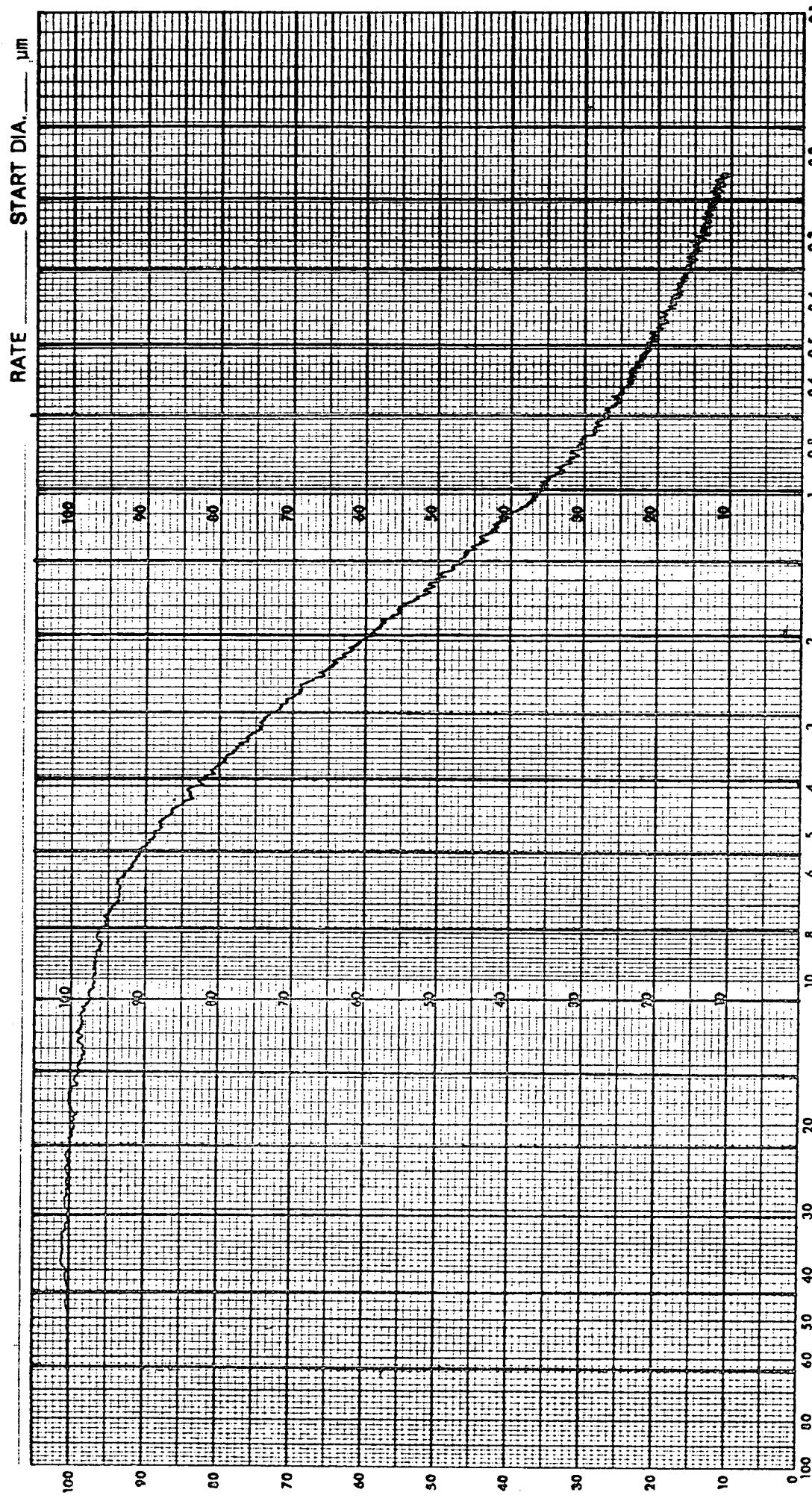
Density g/cc Viscosity cp

BY

TEMPERATURE °C

RATE

START DIA. μm



© micromeritics instrument corporation

5681 Western Springs Road • Norcross, Georgia 30071 • USA
Telephone: 404/448-8212 • Telex: 7017450

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION

LEBAGG

DATE 1/15/69

Density g/cc LIQUID

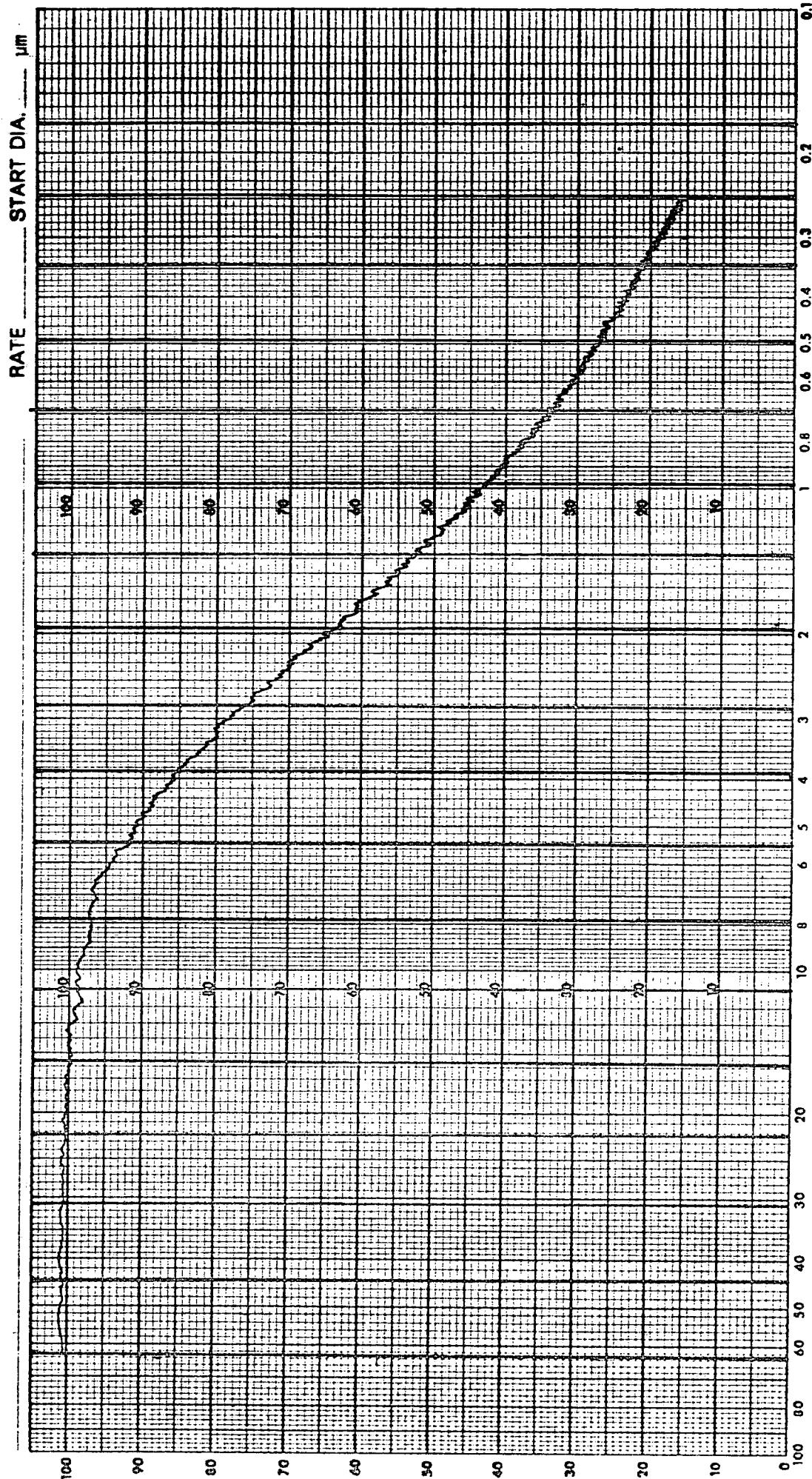
Preparation

BY

TEMPERATURE °C

RATE

START DIA. μm



EQUIVALENT SPHERICAL DIAMETER, μm

micromeritics®
instrument corporation
6611 goshen street, chelmsford, massachusetts 01824 • usa
telephone 401/448-8282 • tele. 70-7451

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION _____ L-CH'AN G'E 2

DATE 17 Jan.

BY _____
Density _____ g/cc Viscosity _____ cp
LIQUID _____ Density _____ g/cc Proneration

The graph plots Rate (Y-axis, 0 to 100) against Start Dia. (μm) (X-axis, 10 to 100). The curve shows a non-linear relationship, starting at approximately (10, 10), rising to a peak of about (20, 80), then falling to a minimum of about (30, 20), and finally rising sharply to end near (100, 100).

| Start Dia. (μm) | Rate |
|-----------------|------|
| 10 | 10 |
| 20 | 80 |
| 30 | 20 |
| 40 | 40 |
| 50 | 50 |
| 60 | 60 |
| 70 | 70 |
| 80 | 80 |
| 90 | 90 |
| 100 | 100 |

EQUIVALENT SPHERICAL DIAMETER.

micromeritics
instrument corporation
5620 goshen springs road • norcross, georgia 30071 • usa
toll-free 800-241-3343 • fax 404-929-2905

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION CERIAC 2.

Dry 7

DATE 15 Jan

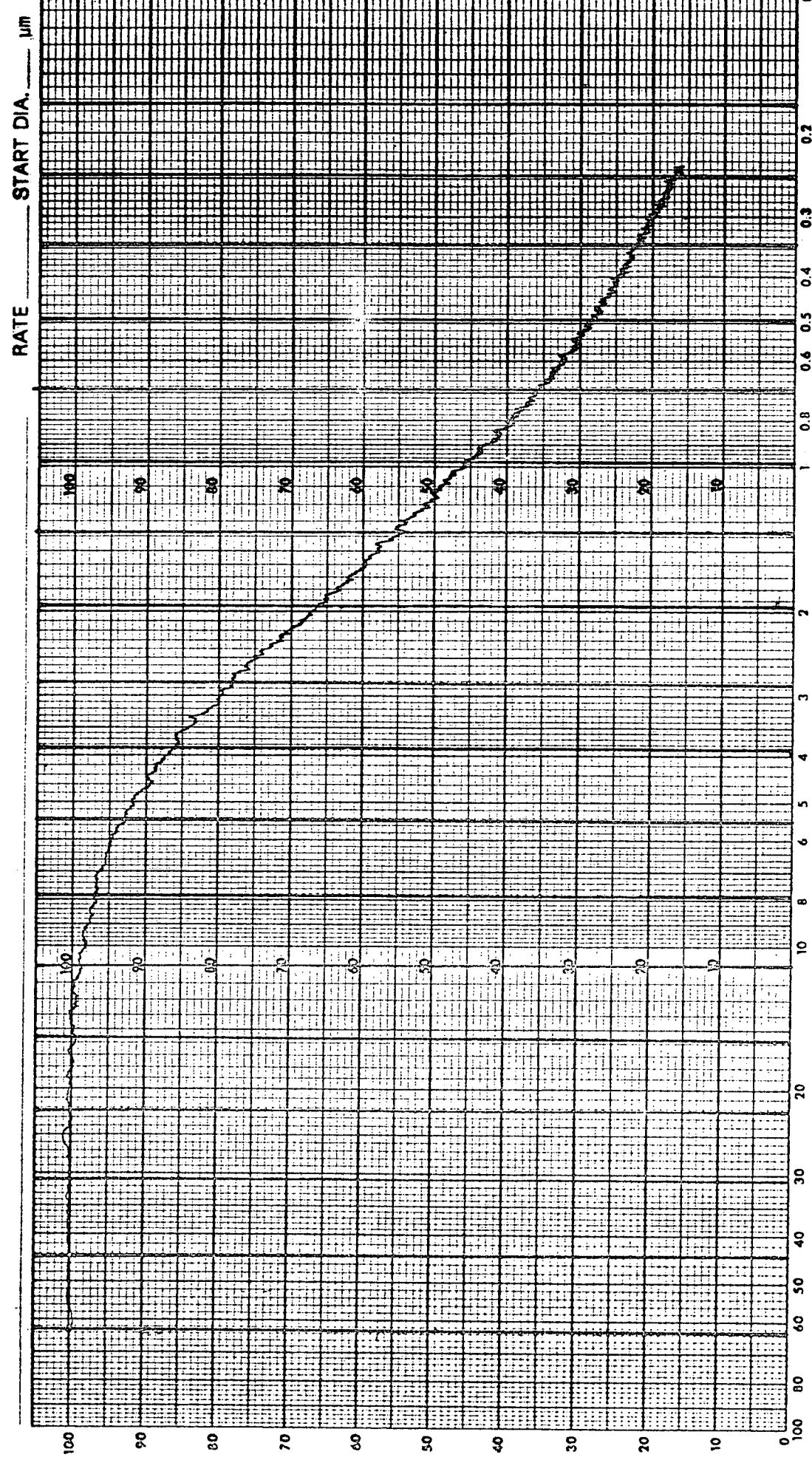
Density g/cc LIQUID

g/cc Viscosity

BY

Preparation

TEMPERATURE °C



EQUIVALENT SPHERICAL DIAMETER, μm

© Micromeritics Instrument Corporation

5601 Johnson Springs Road • Norcross, Georgia 30071 • U.S.A.
Telephone 404/449-8282 • Telex 70-7450



micromeritics

instrument corporation

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION LEBANON 2

DATE 19 Jan

Density _____

Viscosity g/cc

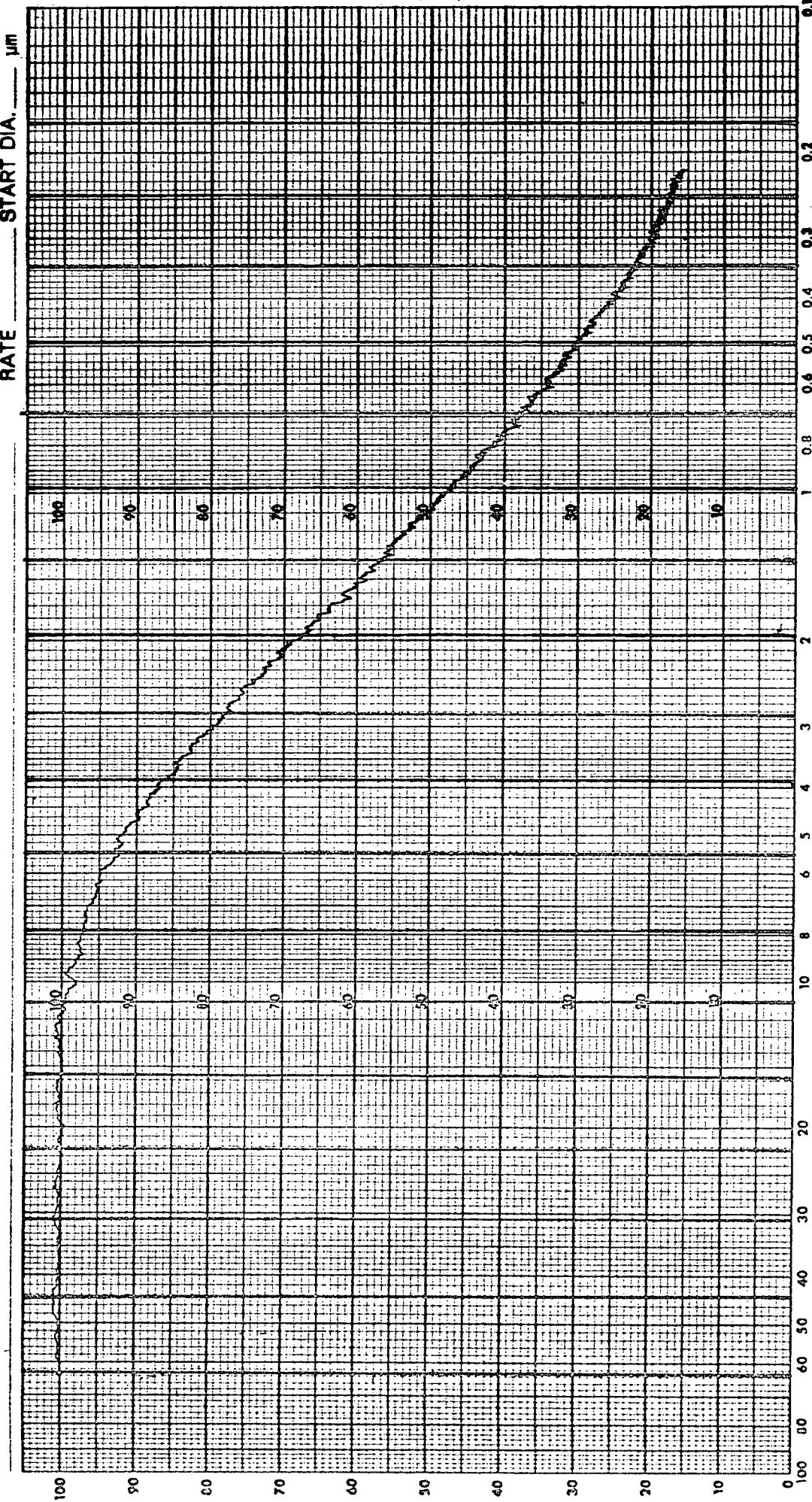
BY

Preparation -

TEMPERATURE °C

TEMPERATURE

TEMPERATUR

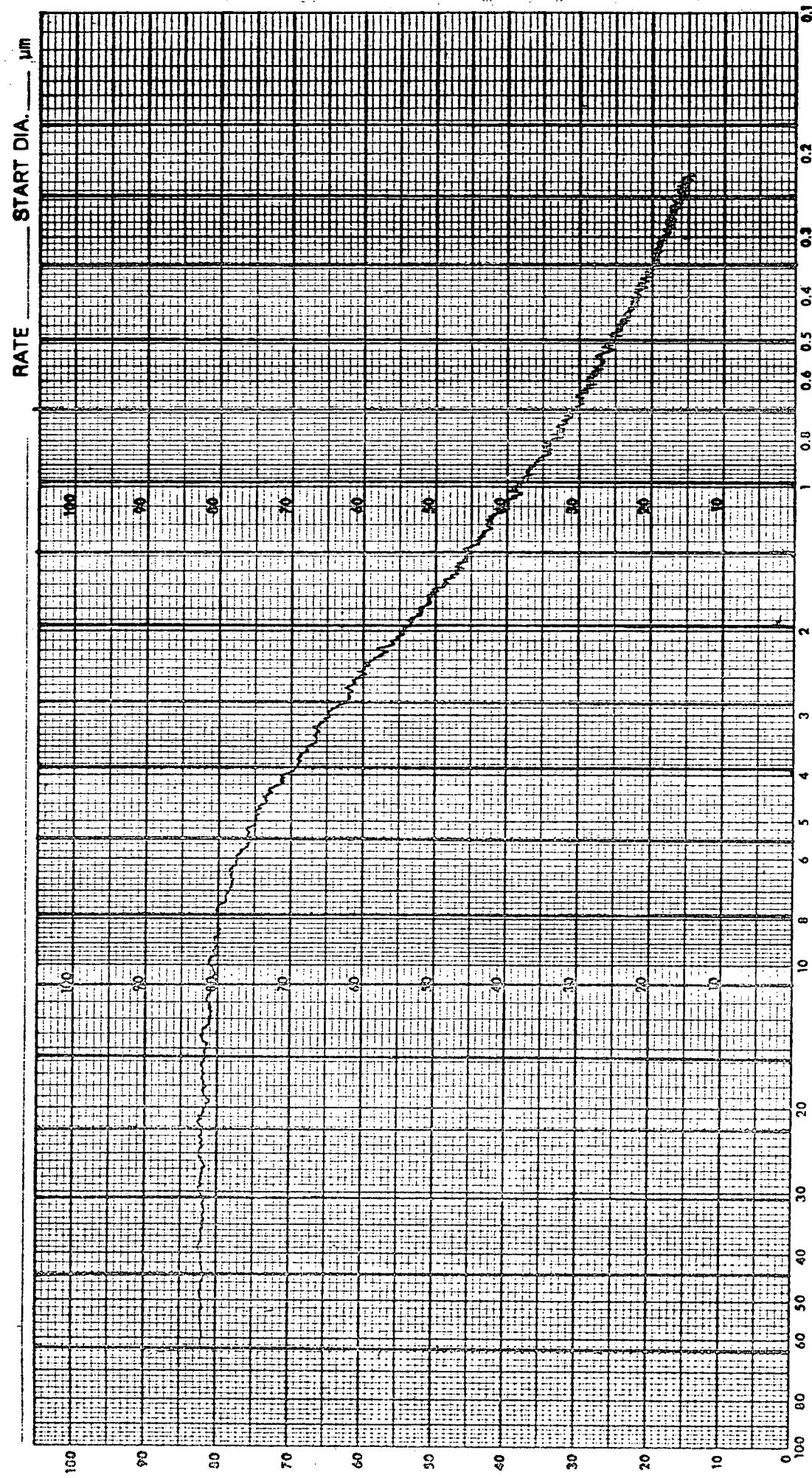


EQUIVALENT SPHERICAL DIAMETER, μ

micromeritics
instrument corporation
5900 goshen springs road • torrington, connecticut 06790 • (203) 567-1111 • telex 92000
international offices: austria, belgium, denmark, england, france, germany, ireland, italy, netherlands, sweden, switzerland, u.s.s.r., u.k.s.a., west germany

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION C-1312 G.C. Day 9 DATE 23 Jan
Density 1.00 g/cc LIQUID Density 1.00 g/cc Viscosity cp
Preparation BY TEMPERATURE °C



micromeritics
Instrument Corporation
5660 University Street • Kentwood, Georgia 30051 • U.S.A.
Telephone 404/448-8282 Telex 721-7450
Atlanta 710-1000 Lake City 710-1000

PARTICLE SIZE DISTRIBUTION

L-6-B-A-R-G-L-3

SAMPLE IDENTIFICATION

DATE

17 Jan

Density g/cc

LIQUID

Preparation

Preparation

RATE

um

TEMPERATURE °C

BY

cp

START DIA.

um

100

90

80

70

60

50

40

30

20

10

0

100

90

80

70

60

50

40

30

20

10

0

100

90

80

70

60

50

40

30

20

10

0

1

0.8

0.6

0.4

0.3

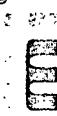
0.2

0.1

EQUIVALENT SPHERICAL DIAMETER, um

© micromeritics instrument corporation

micromeritics®
instrument corporation
5680 quinton springs road • carrollton, georgia 30011 • usa
telephone: 404/721-8128 • fax: 703-745-50



Printed on 06/04/2024

PARTICLE SIZE DISTRIBUTION

Dye 2.

SAMPLE IDENTIFICATION

DATE 18 Jan

BY

TEMPERATURE °C

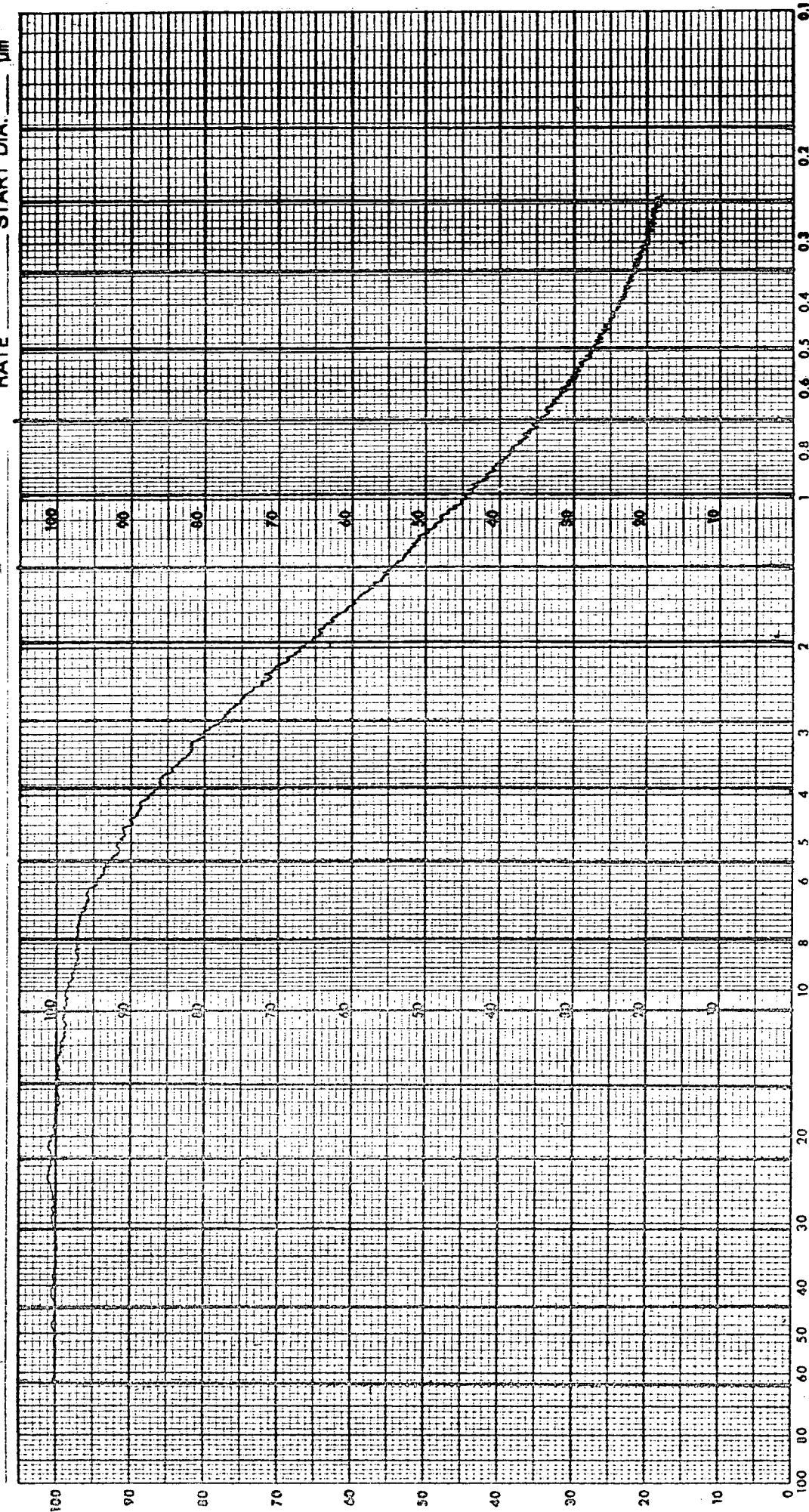
RATE μm

Density g/cc

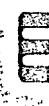
LIQUID

Viscosity cp

Preparation



EQUIVALENT SPHERICAL DIAMETER, μm



© Micromeritics Instrument Corporation 1981

PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION LE372.6C DAY 3

Density 1.02 g/cc LIQUID Water Preparation Day 3

Density 1.02 g/cc Viscosity 1.0 cp

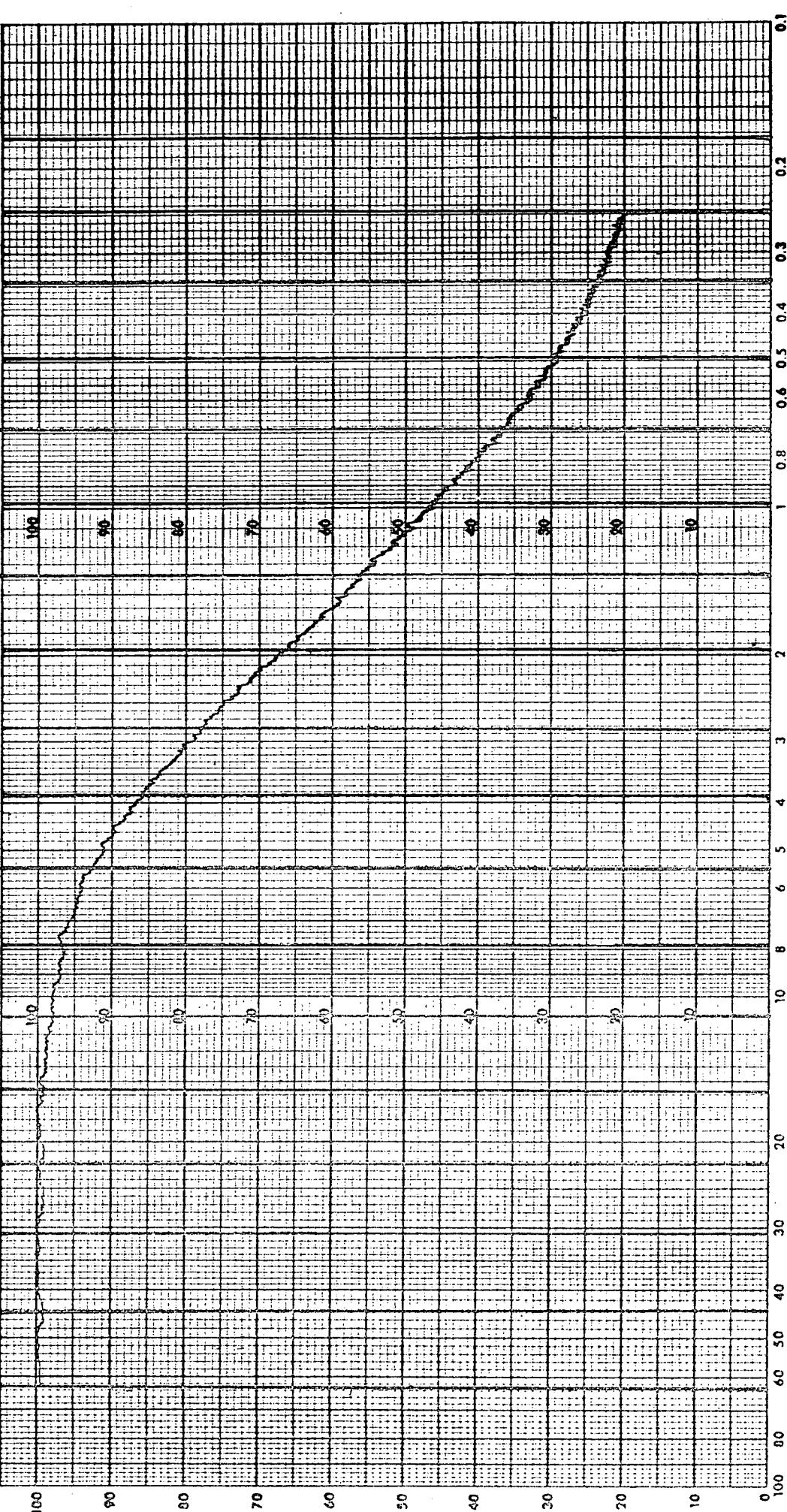
BY Day 3

TEMPERATURE 25 °C

RATE 10 μm/min

START DIA. 10 μm

EQUIVALENT SPHERICAL DIAMETER, μm



PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION 153A12G2

Day 4

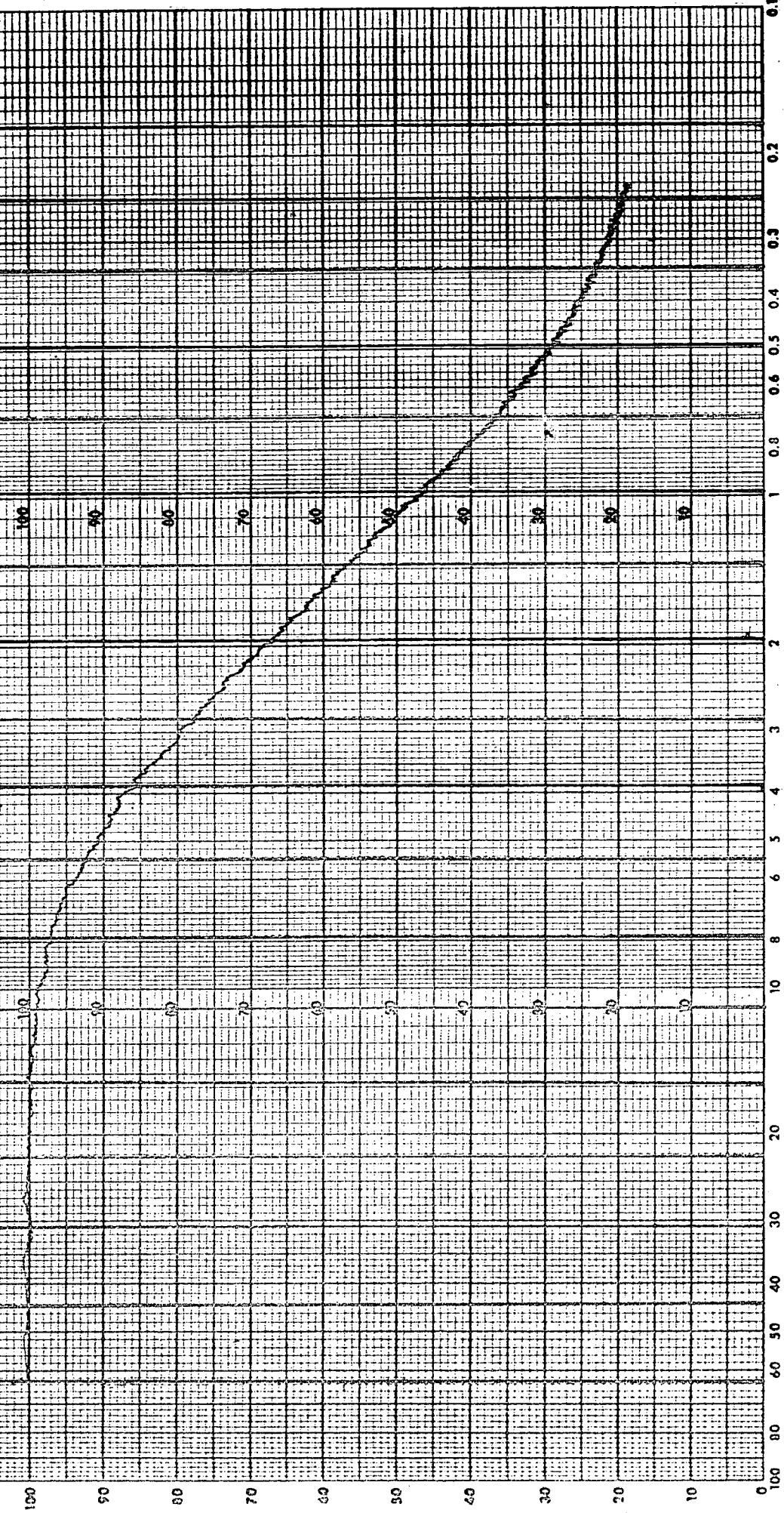
DENSITY 2.0 g/cm³

LIQUID Preparation

RATE 2.0 mm/min

TEMPERATURE 20 °C

BY micromeritics



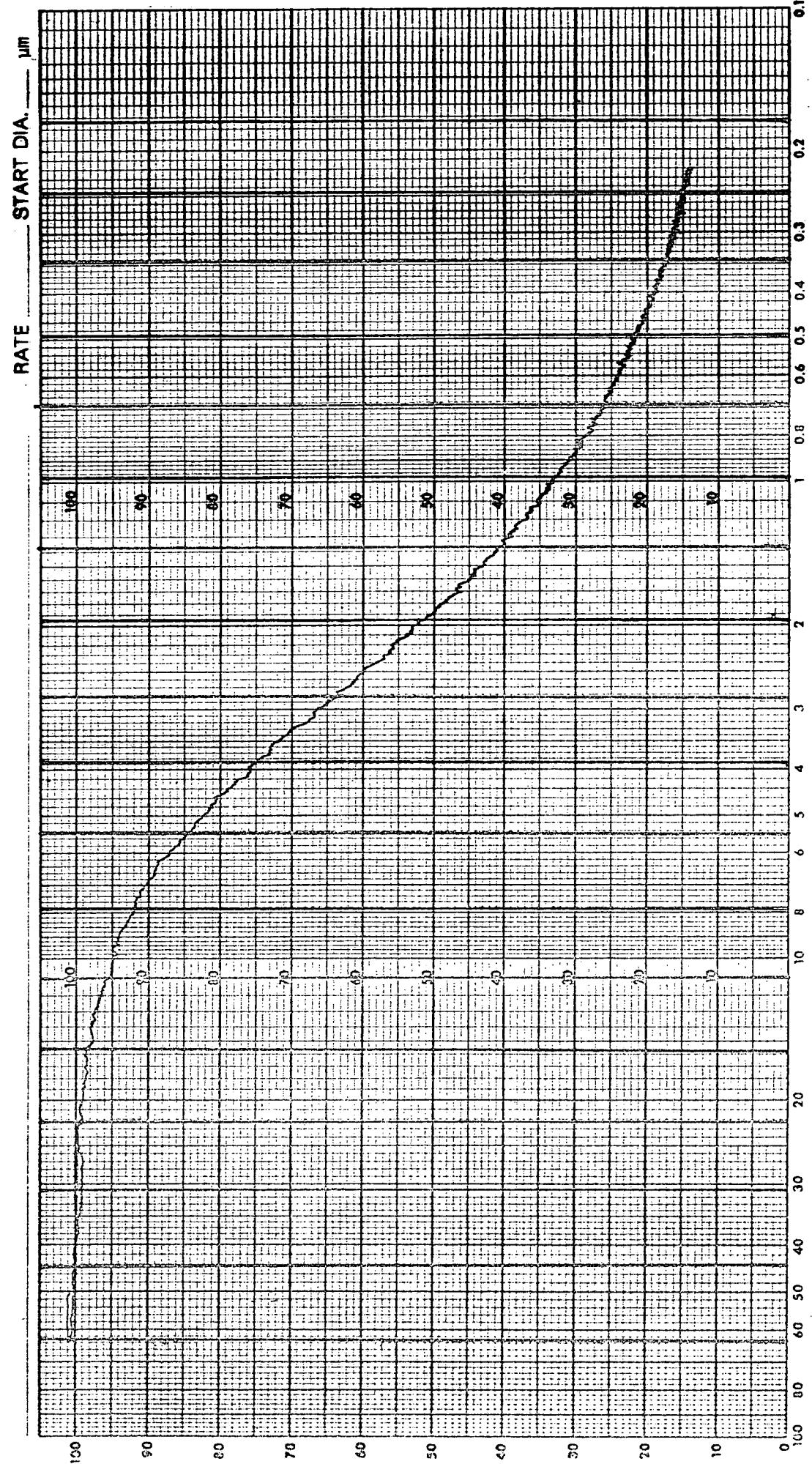
PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION *L-382 C 4*

Density *1.34* / LIQUID Preparation

Density *g/cc* Viscosity *cp* BY

DATE *17 Jan.*



PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION C 1342 G-4

Density 1.00 LIQUID Water

Preparation Day ~

DATE 1st Jan

BY

TEMPERATURE 20°C

RATE 100 μm/min

START DIA. 1.0 mm

Viscosity 100 cp

Density 1.00 g/cc

Viscosity 100 cp

Temperature 20°C

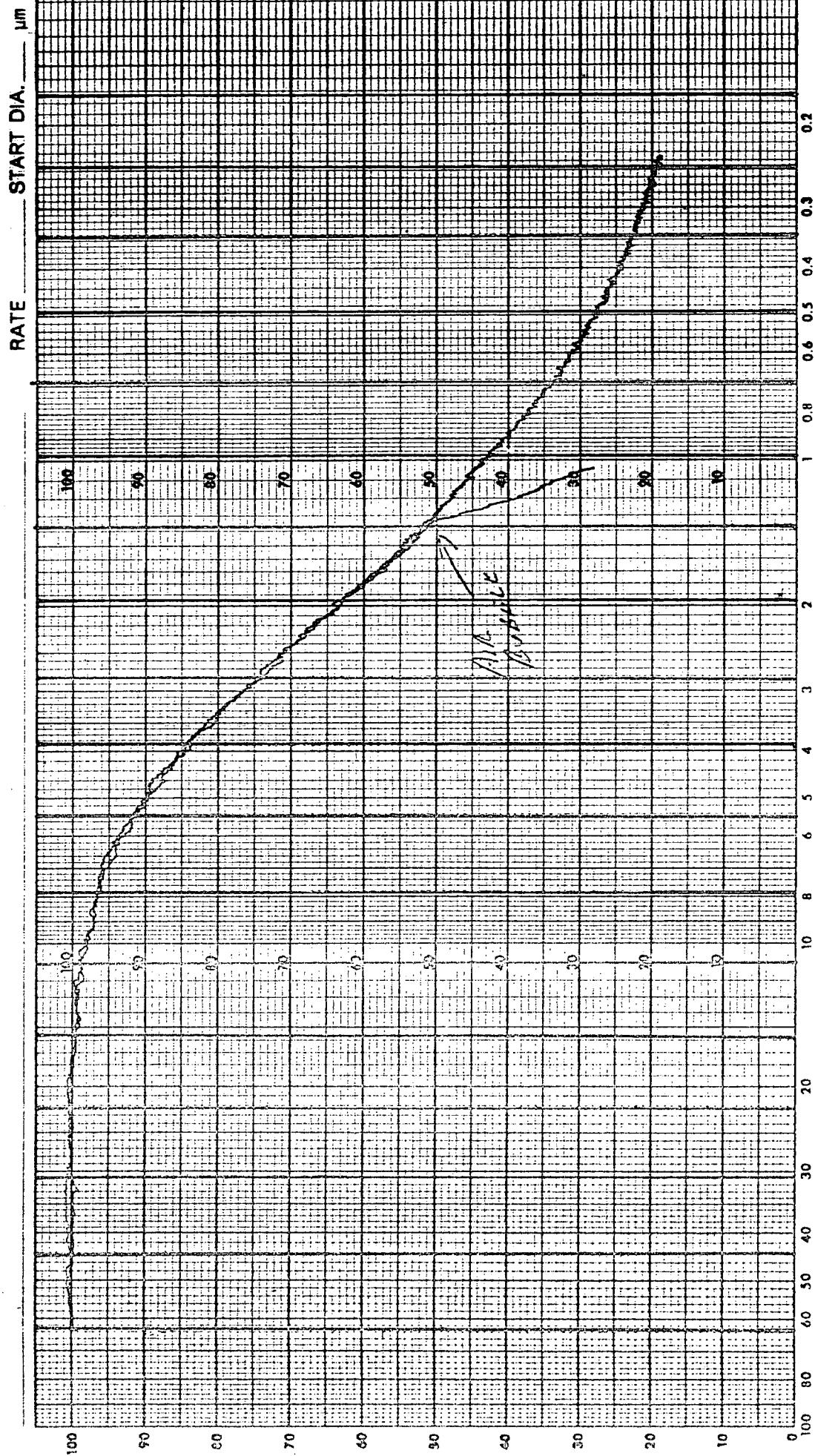
Rate 100 μm/min

Start Dia. 1.0 mm

Graph showing the relationship between Viscosity (cp) and Start Dia. (mm) for sample C 1342 G-4. The graph shows two curves: one for Density = 1.00 g/cc and one for Viscosity = 100 cp. Both curves show an increase in Start Dia. as Viscosity increases from 100 to 1000 cp.

| Viscosity (cp) | Start Dia. (mm) - Density 1.00 g/cc | Start Dia. (mm) - Viscosity 100 cp |
|----------------|-------------------------------------|------------------------------------|
| 100 | 1.0 | 1.0 |
| 200 | 1.2 | 1.2 |
| 300 | 1.4 | 1.4 |
| 400 | 1.6 | 1.6 |
| 500 | 1.8 | 1.8 |
| 600 | 2.0 | 2.0 |
| 700 | 2.2 | 2.2 |
| 800 | 2.4 | 2.4 |
| 900 | 2.6 | 2.6 |
| 1000 | 2.8 | 2.8 |

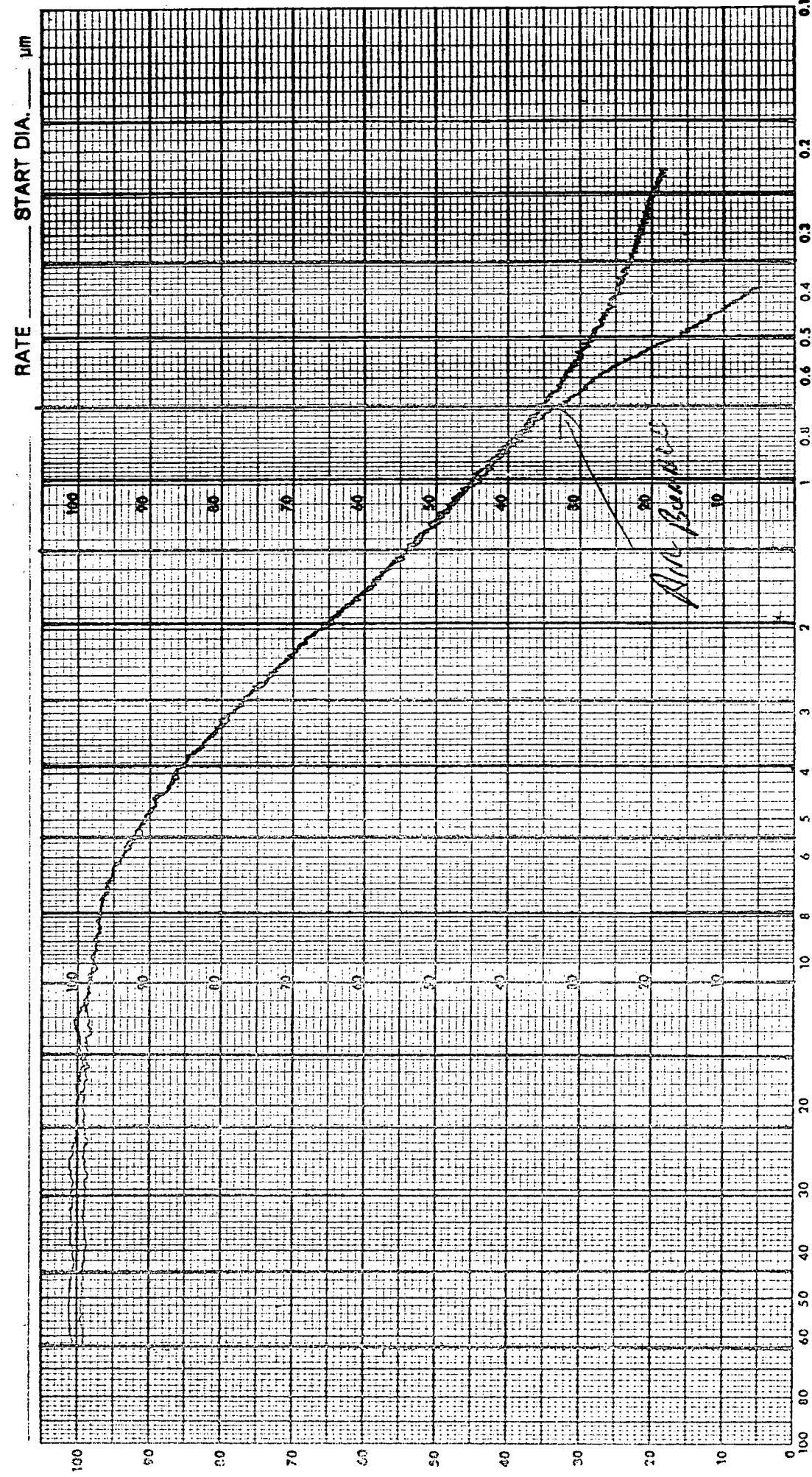
PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION C 13 M12 C 4DATE 19 JanDensity 1.12 g/cc LIQUIDPreparation Day 3 BY cpTEMPERATURE 20°CEQUIVALENT SPHERICAL DIAMETER, μm

micrometrics®
instrument corporation
5001 quinton springs road • norcross, georgia 30071 • usa
telephone 404/961-8382 • telex 707451

PARTICLE SIZE DISTRIBUTION

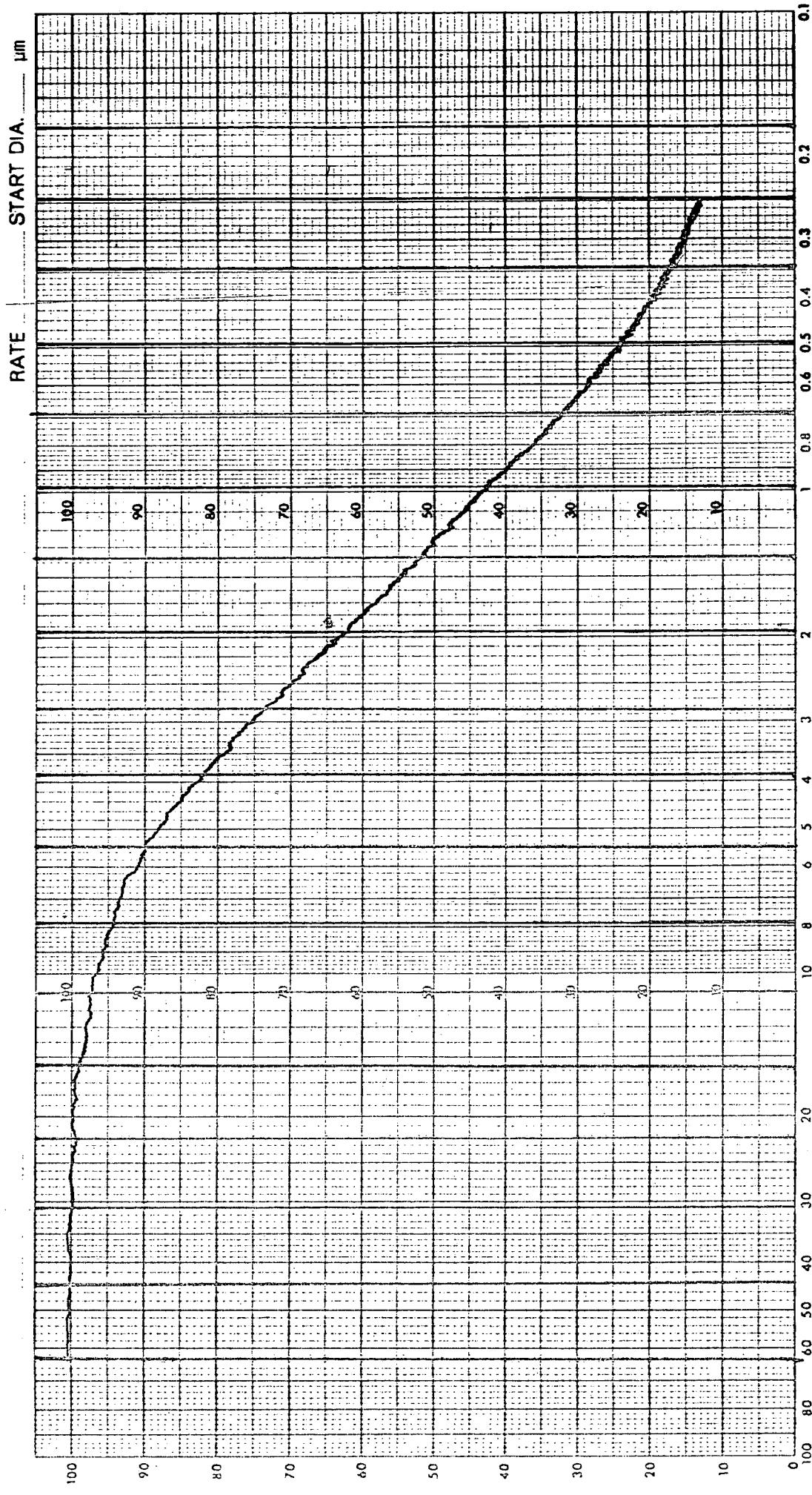
SAMPLE IDENTIFICATION Sample C 4
Density g/cc LIQUID Oil
Preparation Dog



PARTICLE SIZE DISTRIBUTION

SAMPLE IDENTIFICATION *Le Range S Day*
 Density g/cc LIQUID
 Preparation H_2O_2 TREATED

DATE *Jan 31 83*
 BY
 TEMPERATURE $^{\circ}C$

EQUIVALENT SPHERICAL DIAMETER, μm

PARTICLE SIZE DISTRIBUTION

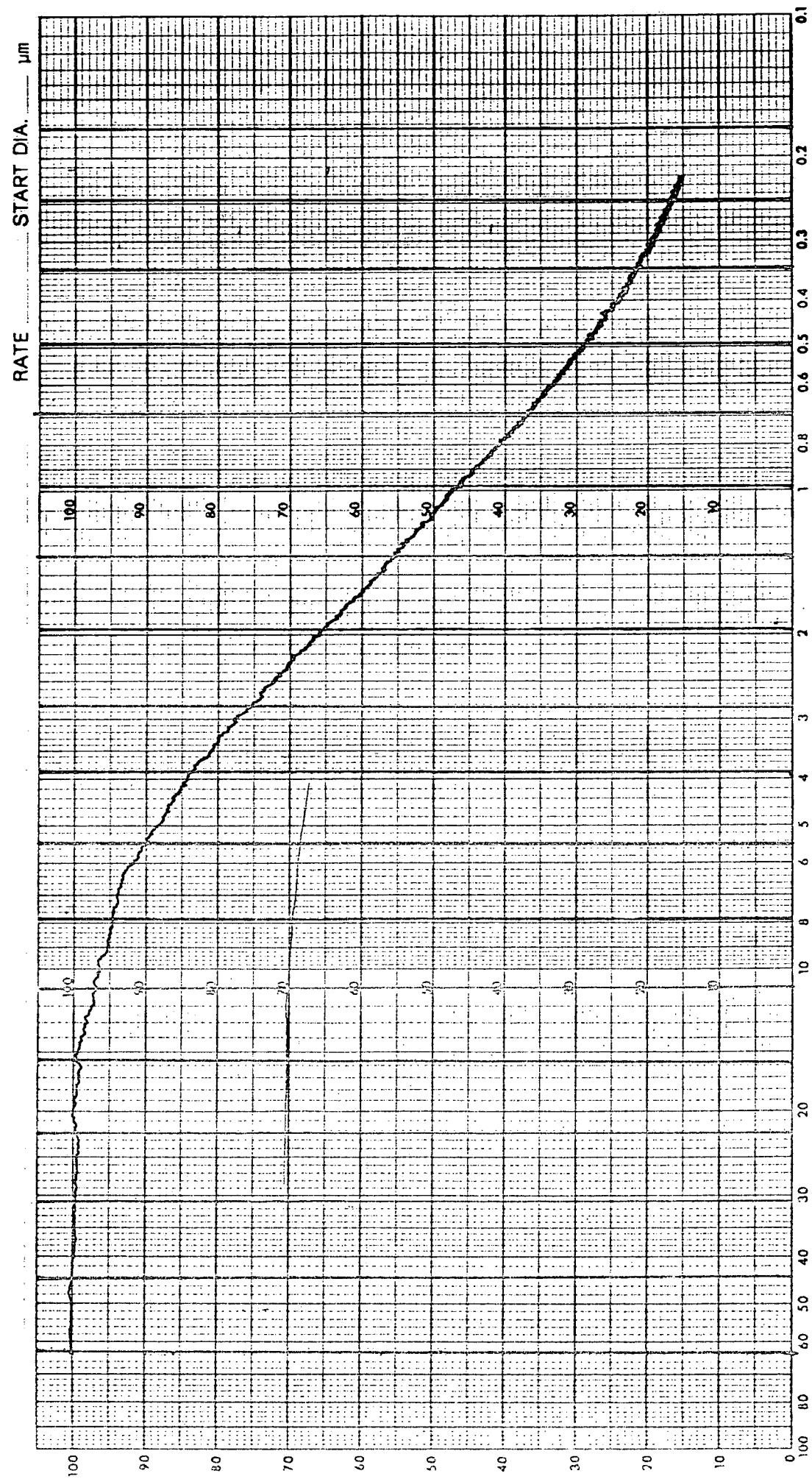
SAMPLE IDENTIFICATION

Density ... g/cc LIQUID

Preparation ... H_2O_2 TREATMENT

60% DRY

DATE 1/21/82
BY _____
TEMPERATURE $^{\circ}\text{C}$ _____



EQUIVALENT SPHERICAL DIAMETER, μm

PARTICLE SIZE DISTRIBUTION

CASINO GEL 5[°] DAY

SAMPLE IDENTIFICATION

Density LIQUID

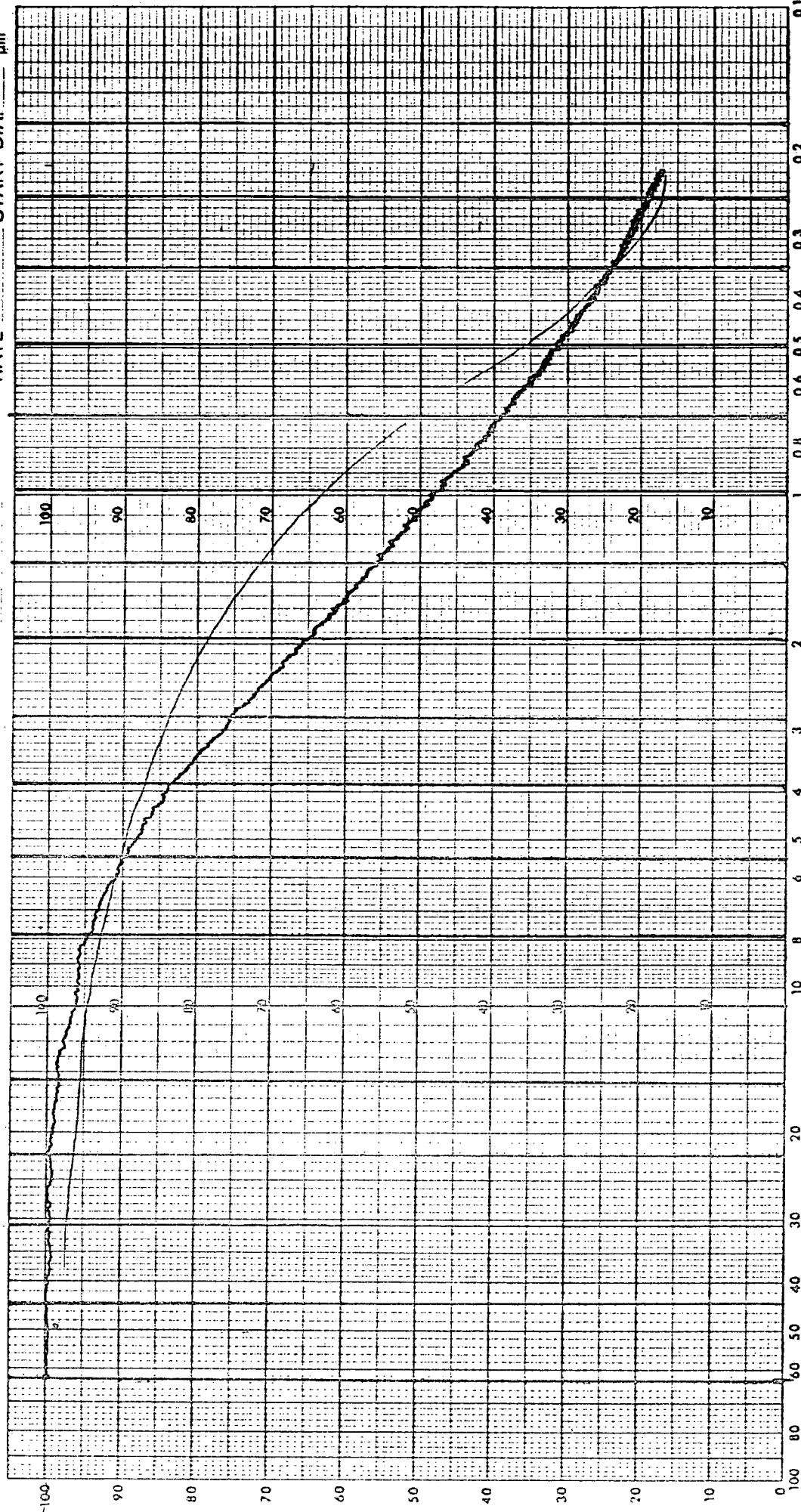
Preparation H₂O₂ TREN GED.

DATE FEB 2/85

BY

TEMPERATURE °C

RATE START DIA. μm



EQUIVALENT SPHERICAL DIAMETER, μm

micromeritics[®]

instrument corporation

2001 Preston Street • Fort Worth, Texas 76107 • USA
Telephone: (817) 283-2141

APPENDIX 2
SIZDIST OUTPUT

LE 279 1

D50 16-4 PH ANALYSIS

11/29/63

PHI PCT. CUMUL.

| | | |
|-------|--------|--|
| 3.50 | .00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .50 | |
| 6.00 | .50 | |
| 6.50 | 1.00 | |
| 7.00 | 2.50 | |
| 7.50 | 3.00 | |
| 8.00 | 5.00 | |
| 8.50 | 6.50 | |
| 9.00 | 9.50 | |
| 9.50 | 11.50 | |
| 10.00 | 15.00 | |
| 10.50 | 23.50 | |
| 11.00 | 41.50 | |
| 11.50 | 57.50 | |
| 12.00 | 66.00 | |
| *** | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

10.40 1.31 - .96 2.96 KRUMBETZ + BETTI JOHN (1938) MOMENT MEASURE FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 11.27 | 5TH | 6.00 | 16TH | 10.06 | 25TH | 10.54 |
|-------------|--------|------------------|------|-------------------------|-----------------|-------|-----------------|-------|
| PCT. | GRAVEL | .00 | SAND | 6.00 | SILT (PIPELINE) | 6.00 | CLAY (PIPELINE) | 6.00 |
| | | | | | (SEDOGRAPH) | 5.00 | (SEDOGRAPH) | 95.00 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 5.00 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LAESL'S SHEPARD - CLAY

FOLK(GNE)-MUD

(SCS)-CLAY

LE 273 2

SEDIGRAPH ANALYSIS

31/26/63

PHI PCT. CUMPT.

| | |
|-------|--------|
| 3.50 | 0.00 |
| 4.00 | .50 |
| 4.50 | .50 |
| 5.00 | 1.00 |
| 5.50 | .25 |
| 6.00 | 1.50 |
| 6.50 | 1.00 |
| 7.00 | 2.50 |
| 7.50 | .25 |
| 8.00 | 2.75 |
| 8.50 | 1.25 |
| 9.00 | 4.50 |
| 9.50 | 1.50 |
| 10.00 | 5.50 |
| 10.50 | 1.50 |
| 11.00 | 7.00 |
| 11.50 | 2.00 |
| 12.00 | 9.00 |
| 12.50 | 2.50 |
| 13.00 | 11.50 |
| 13.50 | 8.00 |
| 14.00 | 19.50 |
| 14.50 | 4.00 |
| 15.00 | 23.50 |
| 15.50 | 12.50 |
| 16.00 | 36.00 |
| 16.50 | 12.50 |
| 17.00 | 45.50 |
| 17.50 | 10.50 |
| 18.00 | 59.00 |
| 18.50 | 41.00 |
| 19.00 | 100.00 |

MEAN ST.DEV. SKENNESS KURTOSIS

10.28 1.53 -.85 3.03 KRUMBELIN + PETTIGRUE (1936) MOMENT MEASURE FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 11.57 | 5TH | 7.33 | 16TH | 9.73 | 25TH | 10.56 |
|----------------|--------|------------------|------|---------------------------|----------------|-------|----------------|-------|
| PCT. | GRAVEL | .00 | SAND | 3.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 |
| | | | | | (SEDIGRAPH) | 16.50 | " (SEDIGRAPH)" | 94.5 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 5.50 | PCT.GRAVEL+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD | -CLAY | FOLK(GMS)-MUD | | | | | (SCS)-CLAY | |

LEBERGE 1 DAY 1

SEDIGRAPH ANALYSIS

PHI PCT. CUMFCT.

01/26/63

3.50 0.00

4.00 .50 0.00

4.50 1.00 .50

5.00 1.50 1.50

5.50 2.00 3.00

6.00 2.50

6.50 2.50 5.50

7.00 4.00 7.00

7.50 8.50 12.50

7.53 21.00

8.00 10.50

8.00 31.50

8.50 11.00

8.50 42.50

9.00 19.50 53.00

9.50 11.50 63.50

10.00 6.00

10.00 77.50

10.50 6.50

10.50 84.00

11.00 4.00

11.00 65.00

***** 12.00

***** 100.00

REPORT

Mile

MEAN ST.DEV. SKEWNESS KURTOSIS

" 8.39 " 1.36 -.26 .06 KRUMBELIN + PETT JOHN (1973) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| | | | | | | | | |
|-------------|--------|------|------|------|------|-------|------|-------|
| PERCENTILES | MEDIAN | 3.74 | 5TH | 5.30 | 16TH | 7.21 | 25TH | 7.63 |
| | | | 75TH | 9.34 | 64TH | 10.50 | 95TH | ***** |

| | | | | | | | |
|-------------|-----|------|------|----------------|-------|----------------|-------|
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.60 | CLAY (PIPETTE) | 0.00 |
| | | | | (SEDIGRAPH) | 31.50 | (SEDIGRAPH) | 62.50 |

GRAVEL+SAND .00 SILTY(SILT+CLAY) 31.50 PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEPARD -SILTY CLAY FOLK(GMC)-MUD (SCS)-CLAY

COMMENTS -

LEBERGE 1 DAY 1 AIR BUBBLE AT 11 PHI 0.5 MICRON

LEBARGE 1 DAY 2

SEDIGRAPH ANALYSIS

PHI PCT. CUMPT.

01/28/68

| | | |
|-------|--------|------|
| 3.50 | 1.00 | |
| 4.00 | .50 | 0.00 |
| 4.50 | 1.00 | .50 |
| 5.00 | 1.00 | 1.50 |
| 5.50 | 1.00 | 2.50 |
| 6.00 | 1.00 | 4.00 |
| 6.50 | 2.75 | 7.50 |
| 6.50 | 6.25 | |
| 7.00 | 3.75 | |
| 7.00 | 10.00 | |
| 7.50 | 7.50 | |
| 7.50 | 17.50 | |
| 8.00 | 9.00 | |
| 8.00 | 26.50 | |
| 8.50 | 12.00 | |
| 8.50 | 39.50 | |
| 9.00 | 13.00 | |
| 9.00 | 51.50 | |
| 9.50 | 12.50 | |
| 9.50 | 64.00 | |
| 10.00 | 6.50 | |
| 10.00 | 72.50 | |
| 10.50 | 7.50 | |
| 10.50 | 89.00 | |
| 11.00 | 4.50 | |
| 11.00 | 84.50 | |
| 11.50 | 4.50 | |
| 11.50 | 83.00 | |
| 12.00 | 3.50 | |
| 12.00 | 92.50 | |
| 12.00 | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

8.79 1.52 -.12 .01 KRUMBEIN + PETTIGEOR (1938) MOMENT MEASURES
FOR SIZE RANGE 3.5 TO 12.0 PHI

>3 PERCENT OF THE FINES ARE NOT RECOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 8.94 | 5TH | 6.27 | 16TH | 7.40 | 25TH | 7.92 |
|-------------|--------|------------------|-------|-------------------------|-------|----------------|-------|------|
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 5.00 | CLAY (PIPETTE) | 6.00 | |
| | | | | (SEDOGRAPH) | 26.50 | " (SEDOGRAPH) | 73.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 26.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LABEL'S SHEPARD - SILTY CLAY FOLK(GRS)-MUD

(SCS)-CLAY

LEEBERGE 1 CIV 3

SEDIGRAPH ANALYSIS

PHI PCT. CONCENT.

01/23/53

| | | |
|-------|--------|--|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | .25 | |
| 5.00 | .25 | |
| 5.50 | .50 | |
| 6.00 | 1.00 | |
| 6.50 | 2.00 | |
| 7.00 | 3.50 | |
| 7.50 | 6.00 | |
| 8.00 | 13.50 | |
| 8.50 | 22.00 | |
| 9.00 | 11.00 | |
| 9.50 | 33.00 | |
| 10.00 | 13.50 | |
| 10.50 | 46.00 | |
| 11.00 | 12.00 | |
| 11.50 | 58.50 | |
| 12.00 | 11.00 | |
| | 68.00 | |
| | 8.50 | |
| | 76.00 | |
| | 63.50 | |
| | .25 | |
| | 87.75 | |
| | 3.25 | |
| | 91.00 | |
| **** | 9.00 | |
| **** | 100.00 | |

MEAN ST.CEV. SKENNESS KURTOSIS

8.96 1.42 -.10 -.06 KRUMBEN + PETTIGEHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.15 | 5TH | 6.64 | 16TH | 7.65 | 25TH | 8.14 |
|-------------|---------------|------------------|-------|-------------------------|-------------|----------------|-------------|-------|
| | | | 75TH | 10.32 | 84TH | 11.06 | 95TH | 11.50 |
| PCT. GRAVEL | .00 | SAND | 3.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | | (SEDIGRAPH) | 22.00 | (SEDIGRAPH) | 76.00 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 22.00 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS | SHEFARD -CLAY | FOLK(GRS)-MUD | | | | | (SGS)-CLAY | |

LEBARGE 1 DAY

SEDIGRAPH ANALYSIS

PHI FCT. CUMFCT.

01/29/63

| | | |
|-------|--------|--|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| | .50 | |
| 6.00 | .50 | |
| 6.50 | 1.00 | |
| 7.00 | 1.50 | |
| 7.50 | 2.00 | |
| | 2.50 | |
| 8.00 | 3.00 | |
| 8.50 | 17.50 | |
| 9.00 | 9.00 | |
| 9.50 | 26.50 | |
| 10.00 | 13.00 | |
| 10.50 | 39.50 | |
| 11.00 | 12.00 | |
| 11.50 | 51.50 | |
| | 10.00 | |
| 12.00 | 61.50 | |
| 12.50 | 9.00 | |
| 13.00 | 70.50 | |
| 13.50 | 6.75 | |
| 14.00 | 77.25 | |
| 14.50 | 5.25 | |
| | 32.50 | |
| 15.00 | 3.00 | |
| 15.50 | 85.50 | |
| 16.00 | 14.50 | |
| | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.18 1.30 -.01 -.57 KRUMBEN + PETT JOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

>5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.44 | 5TH | 7.18 | 15TH | 7.92 | 25TH | 8.42 |
|----------------|--------|------------------|-------|-------------------------|-------|----------------|------------|-------|
| | | | 75TH | 10.83 | 84TH | 11.73 | 95TH | 12.50 |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDOGRAPH) | 17.50 | (SEDOGRAPH) | 22.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 17.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD | -CLAY | FOLK(GMS)-MUD | | | | | (SCS)-CLAY | |

LEBARGE 1 DAY 6

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

21/28/63

| | | |
|-------|--------|--|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .25 | |
| 6.00 | .25 | |
| 6.50 | 1.50 | |
| 7.00 | 1.25 | |
| 7.50 | 3.25 | |
| 8.00 | 5.25 | |
| 8.50 | 7.00 | |
| 9.00 | 15.50 | |
| 9.50 | 9.00 | |
| 10.00 | 24.50 | |
| 10.50 | 12.50 | |
| 11.00 | 37.00 | |
| 11.50 | 11.50 | |
| 12.00 | 69.50 | |
| 12.50 | 72.00 | |
| 13.00 | 77.50 | |
| 13.50 | 83.50 | |
| 14.00 | 88.25 | |
| 14.50 | 11.75 | |
| 15.00 | 100.00 | |

REPORT
Interf

MEAN ST.DEV. SKEWNESS KURTOSIS

9.31 1.35 -.08 -.49 KRUMBEN + PETTIGRUE (1933) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

>5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAINT FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.57 | 5TH | 7.17 | 16TH | 8.03 | 25TH | 8.52 |
|-------------|--------|------------------|-------|-------------------------|-------|----------------|-------|------|
| PCT. GRAVEL | .90 | SAND | 1.00 | SILT (PIPETTE) | 6.00 | CLAY (PIPETTE) | 6.00 | |
| | | | | (SEOGRAF) | 15.50 | (SEOGRAF) | 15.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 15.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LABELS SHEPARE -CLAY

FOLK(GMS)-MUD

(SCS)-CLAY

LEBARGE 1 DAY 7

SEDIGRAPH ANALYSIS

PHI FCT. CUMFC%.

01/24/68

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| | .50 | * |
| 6.00 | .50 | * |
| 6.50 | 1.00 | * |
| 7.00 | 2.00 | ** |
| 7.50 | 3.50 | *** |
| | 4.50 | **** |
| 7.50 | 5.00 | ***** |
| | 7.00 | ***** |
| 8.00 | 15.00 | ***** |
| 8.50 | 19.50 | ***** |
| 9.00 | 23.50 | ***** |
| 9.50 | 12.00 | ***** |
| 10.00 | 35.50 | ***** |
| 10.50 | 11.50 | ***** |
| 11.00 | 47.00 | ***** |
| 11.50 | 10.50 | ***** |
| 12.00 | 57.50 | ***** |
| | 11.00 | ***** |
| 10.50 | 68.50 | ***** |
| 11.00 | 7.50 | ***** |
| 11.50 | 76.00 | ***** |
| | 6.00 | ***** |
| 11.50 | 82.00 | ***** |
| | 4.50 | ***** |
| 12.00 | 86.50 | ***** |
| 12.50 | 13.50 | ***** |
| | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.33 1.34 -.07 -.56 KRUMBEIN + PETTIGEARN (1935) MOMENT MEASURES
FOR SIZE RANGE 3.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATE. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.64 | 5TH | 7.17 | 16TH | 8.06 | 25TH | 8.56 |
|----------------|--------|------------------|-------|-------------------------|------|----------------|------------|-------------------------|
| | | | 75TH | 10.93 | 84TH | 11.72 | 95TH | 12.50 |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | | | | | (SEDIGRAPH) |
| | | | | | | | | 15.00 (SEDIGRAPH) 35.00 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 15.00 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEFARD | -CLAY | FOLK(GMS)-MUD | | | | | (SCS)-CLAY | |

LEBARGE 1 DAY

SEDIGRAPH ANALYSIS

PHI PCT. CUMFCT.

01/26/63

| | |
|-------|--------|
| 3.50 | 0.00 |
| 4.00 | 0.00 |
| 4.50 | 0.00 |
| 5.00 | 0.00 |
| 5.50 | 0.00 |
| 6.00 | 0.00 |
| 6.50 | .50 |
| 7.00 | 2.00 |
| 7.50 | 5.00 |
| 8.00 | 13.50 |
| 8.50 | 22.00 |
| 9.00 | 10.50 |
| 9.50 | 32.50 |
| 10.00 | 10.50 |
| 10.50 | 43.00 |
| 11.00 | 52.50 |
| 11.50 | 62.00 |
| 12.00 | 70.00 |
| 12.50 | 77.50 |
| 13.00 | 82.50 |
| 13.50 | 17.50 |
| 14.00 | 100.00 |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.45 1.65 -.05 +.65 KRUPBEIN + PETTIGRUE (1935) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.87 | 5TH | 7.25 | 16TH | 8.15 | 25TH | 8.6+ |
|-------------|--------|------------------|-------|-------------------------|----------------|-------|----------------|-------|
| PCT. | GRAVEL | .00 | SAND | 8.00 | SILT (PIPETTE) | 8.00 | CLAY (PIPETTE) | 8.00 |
| | | | | | (SEDIGRAPH) | 13.50 | (SEDIGRAPH) | 16.50 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 13.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LABELS SHEPARD -CLAY

FOLK(GNS)-MUD

(SDS)-CLAY

LEBARGE 1 DAY 9

SEOGRAF-PIPH ANALYSES

PHI PCT. CONCNT.

01/29/33

| | | |
|-------|--------|-------|
| 3.50 | .00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .50 | * |
| 6.00 | .25 | |
| 6.50 | .75 | |
| 7.00 | 2.00 | ** |
| 7.50 | 3.50 | *** |
| 8.00 | 5.00 | **** |
| 8.50 | 6.50 | ***** |
| 9.00 | 14.50 | ***** |
| 9.50 | 22.50 | ***** |
| 10.00 | 11.00 | ***** |
| 10.50 | 33.50 | ***** |
| 11.00 | 10.00 | ***** |
| 11.50 | 43.50 | ***** |
| 12.00 | 11.00 | ***** |
| 12.50 | 54.50 | ***** |
| 13.00 | 10.50 | ***** |
| 13.50 | 65.00 | ***** |
| 14.00 | *.00 | ***** |
| 14.50 | 73.00 | ***** |
| 15.00 | 7.50 | ***** |
| 15.50 | 80.50 | ***** |
| 16.00 | 4.50 | ***** |
| 16.50 | 35.00 | ***** |
| 17.00 | 15.00 | ***** |
| 17.50 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.39 1.38 -.14 -.46 KRUMBEIN + PETTIGRUE (1938) MOMENT MEASURE
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.60 | 5TH | 7.15 | 16TH | 8.03 | 25TH | 8.61 |
|----------------------|--------|------------------|-------|-------------------------|-------|----------------|------|------|
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.0 | |
| | | | | (SEOGRAF) | 14.50 | (SEOGRAF) | 14.5 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 14.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GRS)-MUD | | | | (SCS)-CLAY | | |

LEBARGE 2 DAY 1

SEDIGRAPH ANALYSIS

PHI PCT. CUMFCT.

01/25/83

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 |
| 6.00 | 1.00 | * |
| 6.00 | 2.00 | * |
| 6.50 | 3.00 | * |
| 7.00 | 6.50 | * |
| 7.50 | 7.50 | **** |
| 7.50 | 14.75 | ***** |
| 8.00 | 26.75 | ***** |
| 8.50 | 6.25 | ***** |
| 8.50 | 35.00 | ***** |
| 9.00 | 50.00 | ***** |
| 9.50 | 12.50 | ***** |
| 9.50 | 62.50 | ***** |
| 10.00 | 9.50 | ***** |
| 10.00 | 72.00 | ***** |
| 10.50 | 5.25 | ***** |
| 10.50 | 30.25 | ***** |
| 11.00 | 5.00 | ***** |
| 11.00 | 85.25 | ***** |
| ***** | 14.75 | ***** |
| ***** | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

8.65 1.16 -.68 -.67 KUMBEIN + PETTICORN (1938) MOMENT MEASURED
FOR SIZE RANGE 4.1 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| | | | | | | | | |
|-------------|--------|------|------|----------------|------|----------------|------|-------|
| PERCENTILES | MEDIAN | 9.00 | 5TH | 6.79 | 16TH | 7.57 | 25TH | 7.87 |
| | | | 75TH | 10.18 | 84TH | 10.63 | 95TH | 11.25 |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |

(SEDIGRAPH) 28.75 (SEDIGRAPH) 71.25

GRAVEL+SAND .00 SILT/(SILT+CLAY) 28.75 PCT.GRAV+SAND/SILT+CLAY .00

LABEL'S SHEPARD "SILTY CLAY" FOLK(GMS)-MUD (SCS)-CLAY

COMMENTS -
LEBARGE 2 DAY 1 AIR BUBBLE AFTER 11 PHI

LIBARGE 2 DAY 2

SEDOGRAPH ANALYSIS

PHI PCT. CUMFCT.

01/25/53

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | .50 | * |
| 5.50 | .94 | * |
| 6.00 | 1.44 | * |
| 6.50 | .56 | * |
| 7.00 | 2.00 | |
| 7.50 | 1.75 | ** |
| 8.00 | 3.75 | |
| 8.50 | 3.50 | *** |
| 9.00 | 7.25 | |
| 9.50 | 5.75 | **** |
| 10.00 | 13.00 | |
| 10.50 | 9.00 | ***** |
| 11.00 | 22.00 | |
| 11.50 | 10.00 | ***** |
| 12.00 | 32.00 | |
| 12.50 | 13.00 | ***** |
| 13.00 | 45.00 | |
| 13.50 | 12.50 | ***** |
| 14.00 | 57.50 | |
| 14.50 | 9.00 | ***** |
| 15.00 | 66.50 | |
| 15.50 | 9.00 | ***** |
| 16.00 | 75.50 | |
| 16.50 | 5.50 | ***** |
| 17.00 | 61.00 | |
| 17.50 | 4.50 | ***** |
| 18.00 | 85.50 | |
| 18.50 | 3.00 | ***** |
| 19.00 | 88.50 | |
| 19.50 | 11.50 | ***** |
| 20.00 | 102.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

8.97 1.42 -.10 -.15 KRUMBEIN + PETTIGRAPH (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES MEDIAN 9.26 5TH 5.68 16TH 7.67 25TH 8.15

75TH 10.47 84TH 11.33 95TH *****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00

(SEDOGRAPH) 22.00 (SEDOGRAPH) 78.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 22.00 PCT.GRAV+SAND/SILT+CLAY .00

LABEL'S SHEPARD -CLAY FOLK(GMS)-MUD (SCS)-CLAY

LEBARGE 2 DAY 3

SEDIGRAPH ANALYSIS

PHI PCT. CUMFDT.

01/26/83

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .25 | |
| 6.00 | .75 | |
| 6.50 | 1.00 | ** |
| 7.00 | 1.50 | ** |
| 7.50 | 2.00 | **** |
| 8.00 | 2.50 | ***** |
| 8.50 | 3.00 | ***** |
| 9.00 | 3.50 | ***** |
| 9.50 | 4.00 | ***** |
| 10.00 | 4.50 | ***** |
| 10.50 | 5.00 | ***** |
| 11.00 | 5.50 | ***** |
| 11.50 | 6.00 | ***** |
| 12.00 | 6.50 | ***** |
| 12.50 | 7.00 | ***** |
| *** | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.15 1.34 -.04 -.35 KRUMBEN + PETTIGRAPH (1955) MOMENT MEASURES
FOR SIZE RANGE -.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES MEDIAN 9.37 5TH 7.09 16TH 7.91 25TH 8.36

75TH 10.71 84TH 11.56 95TH 12.72

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.10 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 17.50 (SEDIGRAPH) 32.50

GRAVEL+SAND .00 SILT/(SILT+CLAY) 17.50 PCT.GRAV+SAND/SILT+CLAY .00

LABEL'S SHEPARD -CLAY

FOLK (GRS)-MUD

(SGS)-CLAY

LEBARGE 2 DAY 4

SEDIGRAPH ANALYSIS

PHI PCT. CUMFCT.

01/28/63

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| 6.00 | .25 | |
| 6.50 | 1.25 | * |
| 7.00 | 1.25 | * |
| 7.50 | 5.50 | ***** |
| 8.00 | 6.17 | ***** |
| 8.50 | 14.42 | |
| 9.00 | 9.58 | ***** |
| 9.50 | 24.00 | ***** |
| 10.00 | 12.00 | ***** |
| 10.50 | 36.00 | ***** |
| 11.00 | 11.00 | ***** |
| 11.50 | 47.00 | ***** |
| 12.00 | 10.00 | ***** |
| 12.50 | 57.00 | ***** |
| 13.00 | 9.50 | ***** |
| 13.50 | 66.50 | ***** |
| 14.00 | 6.00 | ***** |
| 14.50 | 72.50 | ***** |
| 15.00 | 6.00 | ***** |
| 15.50 | 78.50 | ***** |
| 16.00 | 6.00 | ***** |
| 16.50 | 84.50 | ***** |
| 17.00 | 15.50 | ***** |
| 17.50 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.33 1.36 -.01 -.66 KRUMBEIN + PETTIGEHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.65 | 5TH | 7.20 | 16TH | 8.03 | 25TH | 8.54 |
|-------------|---------------|------------------|-------|-------------------------|----------------|-------|----------------|-------|
| | | | 75TH | 11.21 | 84TH | 11.96 | 95TH | ***** |
| PCT. | GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 |
| | | | | | (SEDIGRAPH) | 14.42 | (SEDIGRAPH) | 55.55 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 14.42 | PCT.GRAV+SAND/SILT+CLAY | | | | .00 |
| LABELS | SHEPARD -CLAY | FOLK(GMS)-MUD | | | | | (SCS)-CLAY | |

LEBARGE 2 DAY 6

SEOGRAF ANALYSIS

PHI PCT. CUMPCY.

01/28/63

| | | |
|-------|--------|------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | |
| 5.50 | .25 | .25 |
| 6.00 | .25 | |
| 6.50 | .50 | |
| 7.00 | 1.00 | |
| 7.50 | 2.50 | *** |
| 8.00 | 3.50 | |
| 8.50 | 5.00 | **** |
| 9.00 | 3.50 | |
| 9.50 | 2.00 | **** |
| 10.00 | 15.50 | |
| 10.50 | 8.00 | **** |
| 11.00 | 12.00 | **** |
| 11.50 | 24.50 | **** |
| 12.00 | 36.50 | **** |
| | 11.50 | **** |
| | 10.00 | **** |
| 12.50 | 44.00 | **** |
| 13.00 | 58.00 | **** |
| 13.50 | 66.50 | **** |
| 14.00 | 73.50 | **** |
| 14.50 | 6.00 | **** |
| 15.00 | 79.50 | **** |
| 15.50 | 4.00 | **** |
| 16.00 | 83.50 | **** |
| 16.50 | 16.50 | **** |
| | 100.00 | **** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.25 1.35 -.93 -.59 KRUMBEN + PETTIGRUE (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.60 | 5TH | 7.15 | 16TH | 7.97 | 25TH | 8.52 |
|----------------------|--------|------------------|-------|-------------------------|-----------|----------------|-----------|-------|
| | | | 75TH | 11.13 | 84TH | **** | 95TH | **** |
| PCT. GRAVEL | .00 | SAND | 3.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | | (SEOGRAF) | 16.50 | (SEOGRAF) | 53.50 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 16.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GMS)-MUD | | | | (SCS)-CLAY | | |

LERARGE 2 DAY 7

SEDIGRAPH ANALYSIS

PHI FCT. CUMPCT.

01/22/63

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| 6.00 | 0.00 | |
| 6.50 | 1.00 | * |
| 7.00 | 2.00 | ** |
| 7.50 | 3.00 | |
| 8.00 | 4.00 | **** |
| 8.50 | 7.00 | |
| 9.00 | 13.50 | ***** |
| 9.50 | 6.00 | ***** |
| 10.00 | 21.50 | ***** |
| 10.50 | 12.00 | ***** |
| 11.00 | 33.50 | ***** |
| 11.50 | 11.50 | ***** |
| 12.00 | 45.00 | ***** |
| 12.50 | 54.50 | ***** |
| 13.00 | 64.00 | ***** |
| 13.50 | 7.50 | ***** |
| 14.00 | 71.50 | ***** |
| 14.50 | 6.00 | ***** |
| 15.00 | 77.50 | ***** |
| 15.50 | 5.50 | ***** |
| 16.00 | 83.00 | ***** |
| 16.50 | 17.00 | ***** |
| 17.00 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.39 1.34 -.93 -.69 KRUMBEN + PETTJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES MEDIAN 9.76 5TH 7.25 16TH 8.16 25TH 8.65
75TH 11.29 84TH *4444 95TH *4444FCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 13.50 (SEDIGRAPH) 86.50

GRAVEL+SAND .00 SILT/(SILT+CLAY) 13.50 PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEPARD -CLAY FOLK(GMS)-MUD (SCS)-CLAY

LEBARGE 2 DAY 8

SEDIGRAPH ANALYSIS

PHI PCT. CUMECT.

01/28/83

| | | |
|-------|--------|-------|
| 3.50 | 5.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | .50 | |
| 5.50 | 0.00 | |
| 6.00 | .25 | |
| 6.50 | 1.75 | ** |
| 7.00 | 2.00 | ** |
| 7.50 | 5.00 | *** |
| 8.00 | 7.00 | **** |
| 8.50 | 8.00 | ***** |
| 9.00 | 11.00 | ***** |
| 9.50 | 11.00 | ***** |
| 10.00 | 9.50 | ***** |
| 10.50 | 9.50 | ***** |
| 11.00 | 9.50 | ***** |
| 11.50 | 6.50 | ***** |
| 12.00 | 3.50 | *** |
| 12.50 | 5.00 | ***** |
| 13.00 | 16.00 | ***** |
| 13.50 | 100.00 | |

MEAN ST.DEV. SKENNESS KURTOSIS

9.27 1.41 -.15 -.33 KRUMBELIN + PETTIGRUE (1936) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

>.5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATE. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.68 | 5TH | 7.05 | 16TH | 7.95 | 25TH | 8.52 |
|-------------|--------|------------------|-------|-------------------------|-------|----------------|-------|-------|
| | | | 75TH | 11.08 | 84TH | 12.00 | 95TH | ***** |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 6.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDIGRAPH) | 16.50 | (SEDIGRAPH) | 63.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 16.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LABELS SHEPARD -CLAY FOLK(GME)-MUD

(SCS)-CLAY

COMMENTS -
LEBARGE 2 DAY 8 TOOK 5 ATTEMPTS TO OBTAIN AN ANALYSIS DUE TO AIR BUBBLES.

LEBARGE 2 DAY 9

SEDIGRAPH ANALYSIS

01/28/83

PHI PCT. CONCENT.

| | |
|-------|--------|
| 3.50 | 0.00 |
| 4.00 | 0.00 |
| 4.50 | 0.00 |
| 5.00 | 0.00 |
| 5.50 | 0.00 |
| 6.00 | .30 |
| 6.50 | .91 |
| 7.00 | 1.22 |
| 7.50 | 2.44 |
| 8.00 | 4.36 |
| 8.50 | 7.32 |
| 9.00 | 7.93 |
| 9.50 | 15.24 |
| 10.00 | 8.54 |
| 10.50 | 23.73 |
| 11.00 | 10.37 |
| 11.50 | 34.15 |
| 12.00 | 10.37 |
| 12.50 | 44.51 |
| 13.00 | 8.54 |
| 13.50 | 53.05 |
| 14.00 | 9.15 |
| 14.50 | 62.20 |
| 15.00 | 6.71 |
| 15.50 | 66.90 |
| 16.00 | 6.71 |
| 16.50 | 75.61 |
| 17.00 | 4.27 |
| 17.50 | 79.88 |
| 18.00 | 20.12 |
| 18.50 | 100.00 |

REPORT
AUG

MEAN ST.DEV. SKEWNESS KURTOSIS

9.32 1.36 -.02 -.76 KRUMBEN + PETTIGRUE (1988) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.82 | 5TH | 7.26 | 16TH | 8.04 | 25TH | 8.56 |
|----------------------|--------|------------------|-------|-------------------------|----------------|------------|----------------|-------|
| PCT. | GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 |
| | | | | | (SEDIGRAPH) | 15.24 | (SEDIGRAPH) | 84.76 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 15.24 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GMS)-MUD | | | | (SCS)-CLAY | | |

LEBARGE 3 DAY 1

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

01/28/63

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 |
| 5.50 | .50 | .50 |
| 6.00 | .75 | * |
| 6.50 | 1.25 | * |
| 7.00 | 3.00 | *** |
| 7.50 | 5.50 | **** |
| 8.00 | 4.50 | ***** |
| 8.50 | 10.00 | ***** |
| 9.00 | 7.50 | ***** |
| 9.50 | 17.50 | ***** |
| 10.00 | 10.00 | ***** |
| 10.50 | 27.50 | ***** |
| 11.00 | 11.00 | ***** |
| 11.50 | 38.50 | ***** |
| 12.00 | 11.00 | ***** |
| 12.50 | 42.50 | ***** |
| 13.00 | 10.00 | ***** |
| 13.50 | 59.50 | ***** |
| 14.00 | 9.00 | ***** |
| 14.50 | 63.50 | ***** |
| 15.00 | 2.00 | ** |
| 15.50 | 73.50 | ***** |
| 16.00 | 10.00 | ***** |
| 16.50 | 30.50 | ***** |
| 17.00 | 4.00 | **** |
| 17.50 | 34.50 | ***** |
| 18.00 | 15.50 | ***** |
| 18.50 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.20 1.44 -.06 -.52 KRUMBEEK + PETTIGEOR (1935) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES MEDIAN 9.53 5TH 8.92 16TH 7.90 25TH 8.38

75TH 11.23 84TH 11.94 95TH ****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.10 CLAY (PIPETTE) 0.00

(SEDIGRAPH) 17.50 (SEDIGRAPH) 17.50

GRAVEL+SAND .00 SILT/(SILT+CLAY) 17.50 PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEPARD -CLAY FOLK(GMS)-MUD (SCS)-CLAY

COMMENTS -

LEBARGE 3 DISPERANT ADDED, SIT 2 DAYS, MIXED ON PAINT SHAKER AND RUN

LEBARGE 3 DAY 2

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

01/28/53

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| | .25 | |
| 6.00 | .25 | |
| 6.50 | .75 | |
| 7.00 | 2.00 | |
| 7.50 | 4.00 | |
| | 7.00 | |
| 8.00 | 6.50 | **** |
| | 13.50 | |
| 8.50 | 9.00 | ***** |
| | 22.50 | |
| 9.00 | 11.50 | ***** |
| | 34.00 | |
| 9.50 | 11.50 | ***** |
| | 45.50 | |
| 10.00 | 10.00 | ***** |
| | 55.50 | |
| 10.50 | 10.00 | ***** |
| | 65.50 | |
| 11.00 | 7.00 | ***** |
| | 72.50 | |
| 11.50 | 5.50 | ***** |
| | 75.00 | |
| 12.00 | 3.50 | *** |
| | 81.50 | |
| **** | 18.50 | ***** |
| | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.31 1.29 -.05 -.58 KRUMBEN & FETTICH (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATE. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.73 | 5TH | 7.25 | 16TH | 6.14 | 25TH | 8.61 |
|----------------------|--------|------------------|-------|-------------------------|------|----------------|-------|-------------|
| | | | 75TH | 11.23 | 84TH | ***** | 95TH | ***** |
| PCT. GRAVEL | .00 | SAND | 6.00 | SILT (PIPETTE) | 8.60 | CLAY (PIPETTE) | 13.50 | (SEDIGRAPH) |
| | | | | | | | | (SEDIGRAPH) |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 13.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GMS)-MUD | | | | (SCS)-CLAY | | |

LEBARGE 3 DAY 3

SEDIGRAPH ANALYSIS

01/23/63

PHI PCT. CUMPT.

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| 6.00 | 0.00 | |
| 6.50 | 1.26 | * |
| 7.00 | 1.76 | + |
| 7.50 | 4.02 | *** |
| 8.00 | 6.53 | **** |
| 8.50 | 13.57 | ***** |
| 9.00 | 8.54 | **** |
| 9.50 | 22.11 | ***** |
| 10.00 | 11.06 | ***** |
| 10.50 | 33.17 | ***** |
| 11.00 | 10.05 | ***** |
| 11.50 | 43.22 | ***** |
| 12.00 | 10.05 | ***** |
| | 53.27 | |
| | 10.05 | |
| | 63.32 | |
| | 63.32 | |
| | 7.04 | |
| | 70.35 | |
| | 6.83 | |
| | 76.38 | |
| ***** | 23.62 | |
| ***** | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.38 1.37 .43 -.63 KRUMBELIN + PETTE JOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.84 | 5TH | 7.25 | 16TH | 8.14 | 25TH | 8.63 |
|----------------------|---------------|------------------|-------|-------------------------|----------------|------------|----------------|-------|
| | | | 75TH | 11.89 | 34TH | ** | 95TH | **** |
| PCT. | GRAVEL | .00 | SAND | 9.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 |
| | | | | | (SEDOGRAPH) | 13.57 | " (SEDOGRAPH) | 66.43 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 13.57 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | FOLK(GMS)-MUD | | | | | (SCS)-CLAY | | |

LEBARGE 3 DAY 4

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

01/26/63

| | | |
|-------|--------|------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 |
| 6.50 | .25 | 0.00 |
| 7.00 | 2.25 | 0.00 |
| 7.50 | 5.00 | 0.00 |
| 8.00 | 7.50 | 0.00 |
| 8.50 | 13.50 | 0.00 |
| 9.00 | 22.00 | 0.00 |
| 9.50 | 32.50 | 0.00 |
| 10.00 | 43.00 | 0.00 |
| 10.50 | 53.50 | 0.00 |
| 11.00 | 63.50 | 0.00 |
| 11.50 | 70.75 | 0.00 |
| 12.00 | 77.00 | 0.00 |
| 12.50 | 80.50 | 0.00 |
| 13.00 | 86.50 | 0.00 |
| 13.50 | 90.00 | 0.00 |
| 14.00 | 93.50 | 0.00 |
| 14.50 | 96.50 | 0.00 |
| 15.00 | 98.50 | 0.00 |
| 15.50 | 100.00 | 0.00 |

MEAN ST.DEV. SKEWNESS KURTOSIS

5.35 1.50 -.04 -.76 KRUMBEIN + PETTIGRAPH (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.83 | 5TH | 7.25 | 16TH | 8.15 | 25TH | 8.64 |
|-----------------------|--------|------------------|-------|-------------------------|-------------|----------------|-------------|-------|
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | | (SEDIGRAPH) | 13.50 | (SEDIGRAPH) | 86.50 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 13.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEFFARD -CLAY | | FOLK(GMS)-MUD | | | | (SCSI)-CLAY | | |

LEBARGE 4 PAY 1

SEDIGRAPH ANALYSIS

PHI PCT. GUMPT.

01/28/63

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .50 | * |
| 6.00 | 1.00 | * |
| 6.50 | 2.50 | *** |
| 7.00 | 4.00 | **** |
| 7.50 | 6.00 | ***** |
| 8.00 | 7.50 | ***** |
| 8.50 | 15.50 | ***** |
| 9.00 | 24.50 | ***** |
| 9.50 | 11.50 | ***** |
| 10.00 | 36.00 | ***** |
| 10.50 | 12.50 | ***** |
| 11.00 | 48.50 | ***** |
| 11.50 | 11.00 | ***** |
| 12.00 | 53.50 | ***** |
| 12.50 | 67.50 | ***** |
| 13.00 | 6.00 | ***** |
| 13.50 | 73.50 | ***** |
| 14.00 | 5.00 | ***** |
| 14.50 | 78.50 | ***** |
| 15.00 | 4.00 | ***** |
| 15.50 | 82.50 | ***** |
| 16.00 | 2.50 | ***** |
| 16.50 | 85.00 | ***** |
| 17.00 | 15.00 | ***** |
| 17.50 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

8.81 1.40 .93 -.45 KRUI BEIN + PETTIGEHN (1936) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.07 | 5TH | 6.63 | 16TH | 7.53 | 25TH | 6.02 |
|-------------|--------|------------------|-------|-------------------------|-------|----------------|-------|-------|
| | | | 75TH | 10.65 | 84TH | 11.60 | 95TH | ***** |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDIGRAPH) | 24.50 | (SEDIGRAPH) | 75.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 24.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |

LABELS SHEPARD -CLAY FOLK(GRHE)-MUD (SCS)-CLAY

COMMENTS -
LEBARGE 4 DISPERANT ADDED, SIT 2 DAYS, MIXED ON PAINT SHAKER AND RUN

LEEBARGE + DAY 2

1975-1976
Yearly Summary

FBI - FORT CAMPBELL

14/23/2021

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 |
| | .50 | |
| 6.00 | .50 | |
| 6.50 | 1.25 | * |
| | 3.75 | 1.75 |
| 7.00 | 5.50 | ***** |
| 7.50 | 6.00 | ***** |
| | 11.50 | |
| 8.00 | 8.50 | ***** |
| | 26.00 | |
| 8.50 | 18.00 | ***** |
| | 36.00 | |
| 9.00 | 12.50 | ***** |
| | 42.50 | |
| 9.50 | 11.00 | ***** |
| | 53.50 | |
| 10.00 | 9.50 | ***** |
| | 63.00 | |
| 10.50 | 8.50 | ***** |
| | 71.50 | |
| 11.00 | 5.00 | ***** |
| | 76.50 | |
| 11.50 | 4.00 | ***** |
| | 80.50 | |
| 12.00 | 2.50 | **** |
| | 63.00 | |
| 12.50 | 17.00 | ***** |
| | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.00 1.32 .02 -.57 **COEFFICIENTS + ADJUSTMENT TO 1938 MOMENT MEASURES**

► 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILE RATES
INDIAN 7.34
WHITE 7.75
BLACK 8.21

FCT. GRAVEL .00 SAND .00 SILT (PIPETTE) .00 CLAY (PIPETTE) .00

(SEDIGRAPH) 20.00 (SEDIGRAPH) 50.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 20.00PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEPARD - CLAY FOLK (GME) - MUD (SCS) - DISPLAY

LEBARGE 4 DAY 3

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

01/26/83

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 |
| 6.00 | .50 | * |
| 6.50 | .50 | * |
| 7.00 | 2.25 | ** |
| 7.50 | 5.00 | **** |
| 8.00 | 7.25 | ***** |
| 8.50 | 10.00 | ***** |
| 9.00 | 11.00 | ***** |
| 9.50 | 11.50 | ***** |
| 10.00 | 8.50 | ***** |
| 10.50 | 9.50 | ***** |
| 11.00 | 6.00 | ***** |
| 11.50 | 5.50 | ***** |
| 12.00 | 3.00 | *** |
| 12.50 | 19.50 | ***** |
| 13.00 | 100.00 | |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.20 1.32 -.91 -.62 KRUMBEN + SETT JOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 3.5 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.62 | 5TH | 7.18 | 16TH | 8.03 | 25TH | 8.46 |
|-----------------------|--------|------------------|-------|-------------------------|-------|----------------|-------|------|
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 1.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDIGRAPH) | 15.50 | (SEDIGRAPH) | 84.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 15.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPPARD -CLAY | | FOLK(GMS)-MUD | | | | (SOS)-CLAY | | |

LEBARGE - DAY 4

SEDIGRAPH ANALYSIS

01/23/63

PHI PCT. CUM PCT.

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| | .25 | |
| 6.00 | .25 | * |
| 6.50 | .75 | .. |
| 7.00 | 1.51 | ++ |
| 7.50 | 2.51 | **** |
| | 4.52 | ***** |
| 8.00 | 7.04 | ***** |
| | 14.07 | |
| 8.50 | 8.54 | ***** |
| 9.00 | 22.61 | ***** |
| 9.50 | 11.56 | ***** |
| | 34.17 | |
| 10.00 | 11.06 | ***** |
| | 45.23 | |
| 10.50 | 9.55 | ***** |
| | 54.77 | |
| 11.00 | 9.55 | ***** |
| | 64.32 | |
| 11.50 | 7.04 | ***** |
| | 71.36 | |
| 12.00 | 5.53 | ***** |
| | 78.45 | |
| 12.50 | 3.52 | *** |
| | 86.40 | |
| 13.00 | 19.60 | ***** |
| | 100.00 | |

MEAN ST.DEV. SKENNESS KURTOSIS

9.30 1.30 -.03 -.63 KRUMBELIN + FETTIJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK/STATS. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.75 | 5TH | 7.26 | 16TH | 6.11 | 25TH | 6.60 |
|----------------------|--------|------------------|-------|-------------------------|-------|----------------|-------|------|
| | | | 75TH | 11.33 | 84TH | ** | 95TH | ** |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDIGRAPH) | 14.07 | " (SEDIGRAPH) | 35.93 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 14.07 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GMS)-MUD | | | | (SCS)-CLAY | | |

LEBARGE 5 DAY 1

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCT.

02/04/63

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| 6.00 | 1.00 | * |
| 6.50 | 1.50 | ** |
| 7.00 | 3.00 | *** |
| 7.50 | 5.50 | **** |
| 8.00 | 10.00 | ***** |
| 8.50 | 18.00 | ***** |
| 9.00 | 26.25 | ***** |
| 9.50 | 37.50 | ***** |
| 10.00 | 43.00 | ***** |
| 10.50 | 57.50 | ***** |
| 11.00 | 68.00 | ***** |
| 11.50 | 76.00 | ***** |
| 12.00 | 83.00 | ***** |
| 12.50 | 87.00 | ***** |
| 13.00 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.26 1.42 -.10 -.05 KRUMBELN + PETTJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.5 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES MEDIAN 9.61 5TH 6.92 16TH 7.88 25TH 8.42

75TH 10.94 84TH 11.63 95TH *****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 18.00 (SEDIGRAPH) 82.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 18.00 PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEFARD -CLAY FOLK(GMS)-MUU (SCS)-CLAY

LEBARGE 5 DAY 2

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCNT.

02/04/83

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | 0.00 | |
| 6.00 | .50 | |
| 6.50 | 2.50 | *** |
| 7.00 | 2.50 | *** |
| 7.50 | 5.50 | **** |
| 8.00 | 4.50 | ***** |
| 8.50 | 10.00 | ***** |
| 9.00 | 6.50 | ***** |
| 9.50 | 16.50 | ***** |
| 10.00 | 8.00 | ***** |
| 10.50 | 24.50 | ***** |
| 11.00 | 10.00 | ***** |
| 11.50 | 34.50 | ***** |
| 12.00 | 10.00 | ***** |
| 12.50 | 44.50 | ***** |
| 13.00 | 9.00 | ***** |
| 13.50 | 53.50 | ***** |
| 14.00 | 9.50 | ***** |
| 14.50 | 63.00 | ***** |
| 15.00 | 8.00 | ***** |
| 15.50 | 71.00 | ***** |
| 16.00 | 7.50 | ***** |
| 16.50 | 78.50 | ***** |
| 17.00 | 5.00 | ***** |
| 17.50 | 83.50 | ***** |
| 18.00 | 16.50 | ***** |
| 18.50 | 100.00 | ***** |

MEAN ST.DEV. SKENNESS KURTOSIS

9.32 1.46 -.11 -.71 KRUMBELIN + PETTIGEHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

| | | | | | | | | |
|----------------------|--------|------------------|-------|-------------------------|-------------|----------------|-------------|-------|
| PERCENTILES | MEDIAN | 9.81 | 5TH | 6.90 | 16TH | 7.96 | 25TH | 8.53 |
| | | | 75TH | 11.27 | 84TH | ** | 95TH | *** |
| PCT. GRAVEL | .00 | SAND | 9.00 | SILT (PIPETTE) | 0.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | | (SEDIGRAPH) | 16.50 | (SEDOGRAPH) | 83.50 |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 16.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD -CLAY | | FOLK(GRS)-MUD | | | | (SCS)-CLAY | | |

LEBARGE 5 DAY 3

SEDIGRAPH ANALYSIS

PHI PCT. CUMPCNT.

02/04/83

| | | |
|-------|--------|-------|
| 3.50 | 0.00 | |
| 4.00 | 0.00 | |
| 4.50 | 0.00 | |
| 5.00 | 0.00 | |
| 5.50 | .50 | * |
| 6.00 | 1.00 | * |
| 6.50 | 2.00 | ** |
| 7.00 | 2.00 | ** |
| 7.50 | 4.50 | **** |
| 8.00 | 10.00 | ***** |
| 8.50 | 16.50 | ***** |
| 9.00 | 24.50 | ***** |
| 9.50 | 34.50 | ***** |
| 10.00 | 44.00 | ***** |
| 10.50 | 52.00 | ***** |
| 11.00 | 60.50 | ***** |
| 11.50 | 68.50 | ***** |
| 12.00 | 75.50 | ***** |
| 12.50 | 80.50 | ***** |
| 13.00 | 100.00 | ***** |

MEAN ST.DEV. SKEWNESS KURTOSIS

9.28 1.50 -.14 -.56

KRUMBEIN + PETTICOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATE. GRAPHICALLY

| PERCENTILES | MEDIAN | 9.88 | 5TH | 6.88 | 16TH | 7.95 | 25TH | 8.53 |
|----------------|--------|------------------|-------|-------------------------|-------|----------------|-------|-------|
| | | | 75TH | 11.46 | 84TH | ***** | 95TH | ***** |
| PCT. GRAVEL | .00 | SAND | 0.00 | SILT (PIPETTE) | 9.00 | CLAY (PIPETTE) | 0.00 | |
| | | | | (SEDGRAPH) | 16.50 | (SEDGRAPH) | 83.50 | |
| GRAVEL+SAND | .00 | SILT/(SILT+CLAY) | 16.50 | PCT.GRAV+SAND/SILT+CLAY | .00 | | | |
| LABELS SHEPARD | -CLAY | FOLK(GMS)-MUD | | | | (SCS)-CLAY | | |

APPENDIX 3
X-RAY DIFFRACTOGRAMS

