OKonaz
Pasadena
Honolulu

Highest Blood Pb recorded

$\Delta = 1$

Anemia = 90

Air Pb = 5 μg/m³

EPA

Go to a lower percentile 98

N ≈ 150

NO. 3127. ARITHMETIC PROBABILITY. DESIGNED BY HAZEN, WHIPPLE & FULLER
PLAIN SCALE, 100 DIVISIONS
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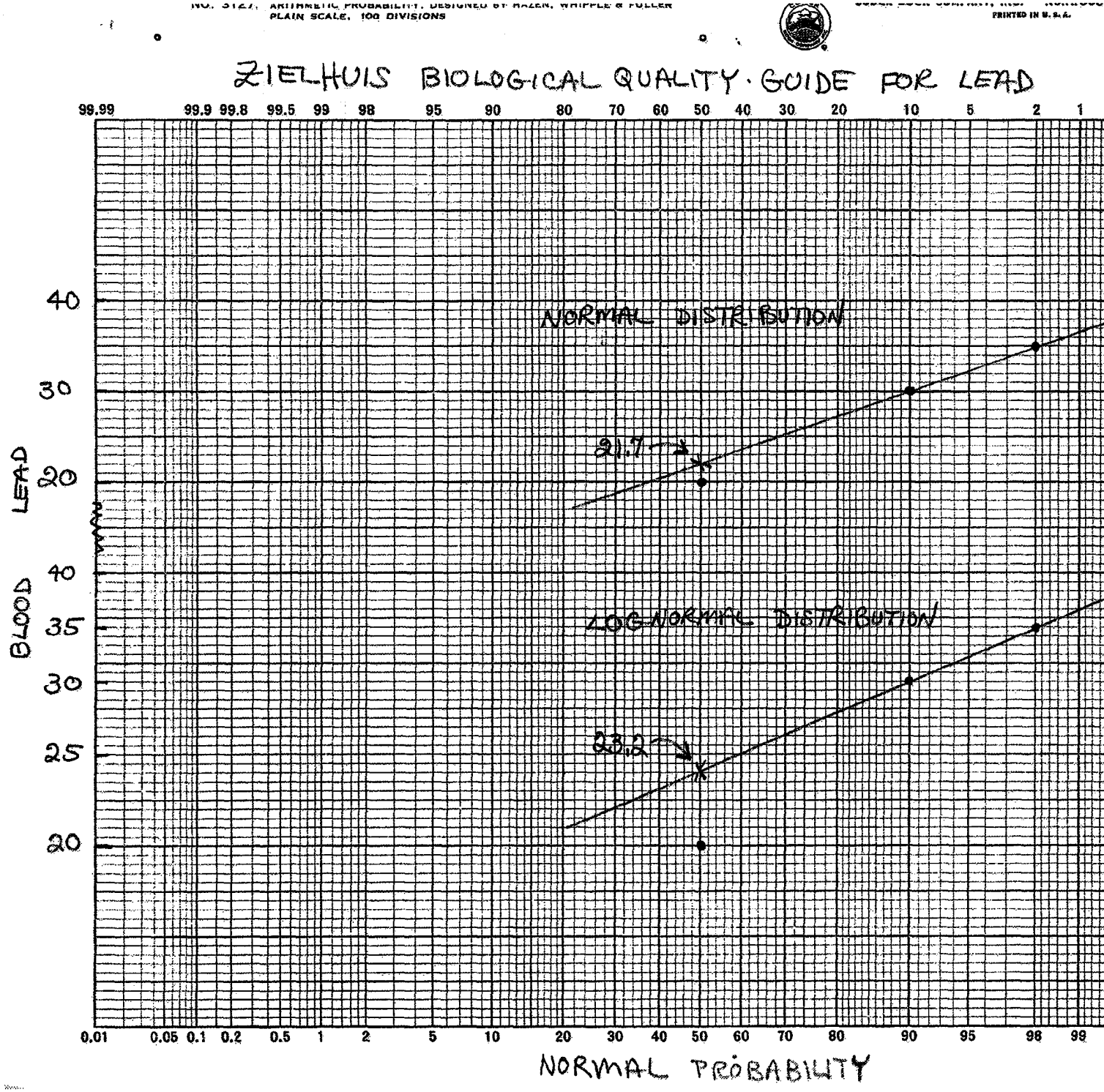

DUP050083262

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PLAIN SCALE, 100 DIVISIONS

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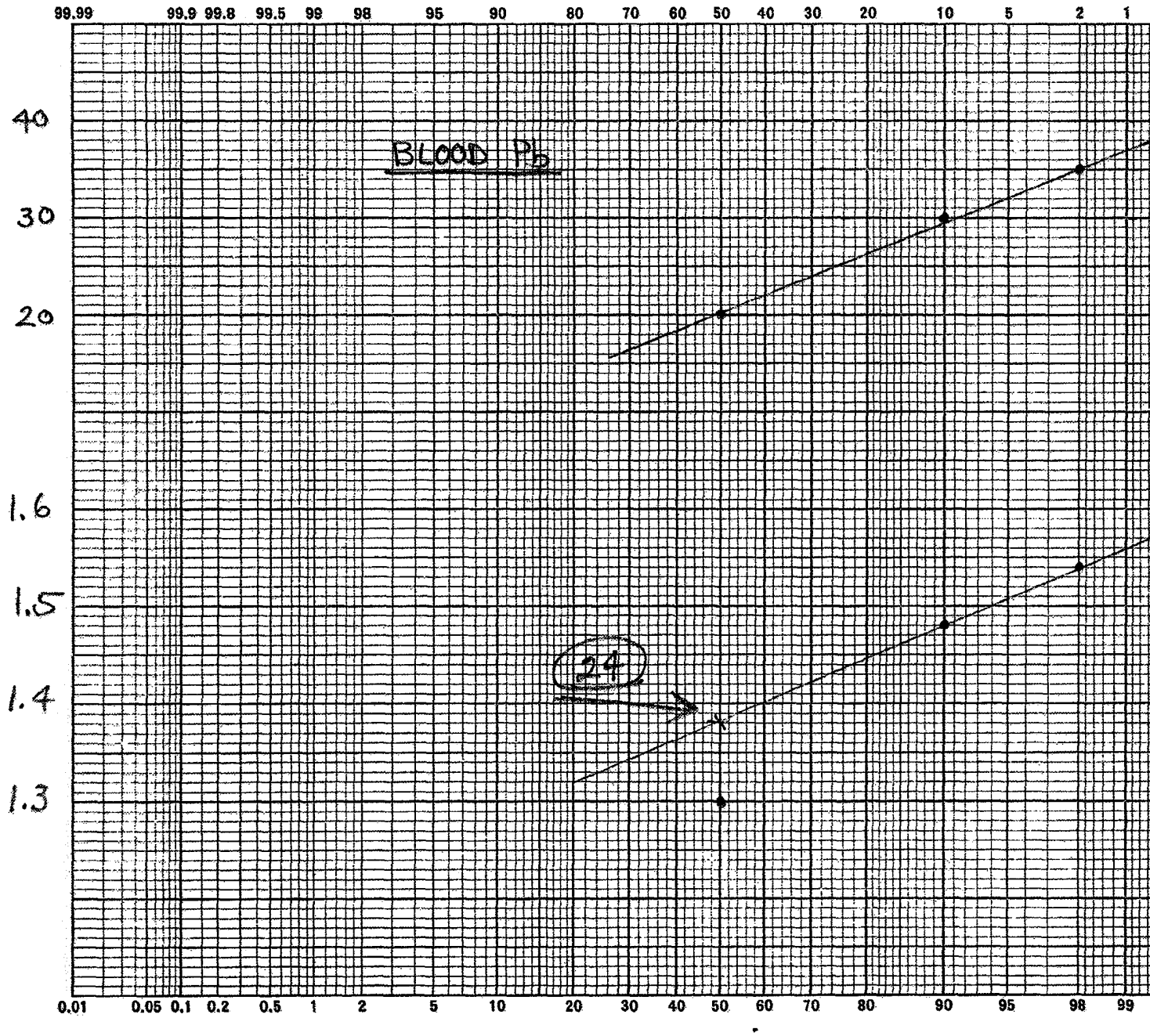

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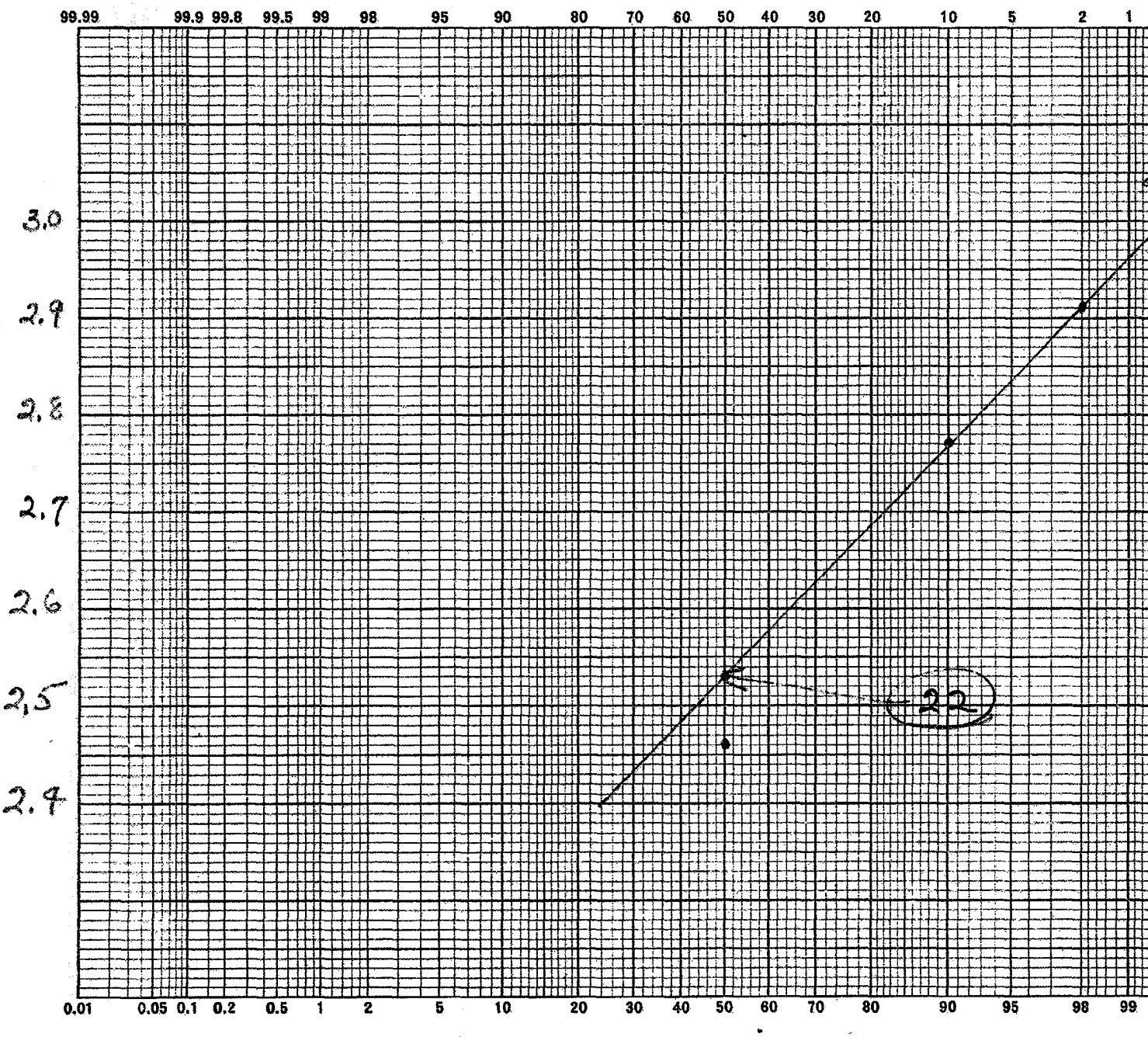

DUP050083265

ESTIMATION OF 97.5 PERCENTILE FOR ZIELHUIS DISTB'N

90% = 30
98% = 35

$10^{**}(\log\mu + 1.282\sigma) = 30$
$10^{**}(\log\mu + 2.054\sigma) = 35$

$\log\mu + 1.282\sigma = \log 30$
$\log\mu + 2.054\sigma = \log 35$

$1.282\sigma = \log\left(\frac{30}{\mu}\right)$

$1.282\sigma - 2.054\sigma = \log 30 - \log 35$

$\sigma = \frac{\log(30/35)}{1.282 - 2.054} = .08672$

$\mu = 10^{**}(\log 30 - 1.282(.08672))$
$= 23.22$

$97.5\% = 10^{**}(\log 23.22 + 1.96(.08672))$
$= \underline{\underline{34.3}}$

$26.11 \rightarrow 35 \Rightarrow AQS = 6.6$
$26.11 \rightarrow 34 \Rightarrow AQS = 5.5$
$26.11 \rightarrow 34.3 \Rightarrow AQS = 5.8$

$$\mu^{.3} + 1.282\sigma = 30^{.3}$$
$$\mu^{.3} + 2.054\sigma = 35^{.3}$$

$$\sigma(1.282 - 2.054) = 30^{.3} - 35^{.3} = .17009$$
$$-.772$$

$$\sigma = .17009$$

$$\mu = \left(30^{.3} - 1.282\sigma\right)^{\frac{1}{.3}} = 22.84$$

$$97.5\% = \left(22.84^{.3} + 1.96\sigma\right)^{\frac{1}{.3}} = \underline{\underline{34.4}}$$

Normal

$$\mu + 1.282\sigma = 30$$
$$\mu + 2.054\sigma = 35$$

$$(1.282 - 2.054)\sigma = 30 - 35$$
$$\sigma = -5/-.772 = 6.48$$

$$\mu = 30 - 1.282\sigma = 30 - 1.282(6.48)$$
$$= 21.70$$

$$97.5\% = 21.70 + 1.96(6.48) = \underline{\underline{34.4}}$$

Table 6

Frequency Tables Showing Distribution of Blood Pb Levels in Okeana. Philadelphia, and Pasadena

Log_{10} Pb Interval	Interval Midpoint (µg/100g)	% Relative Frequency Okeana	Ardmore	Rittenhouse	Pasadena
<0.80	<6.8	0.62	0.67	0	0
[0.80-0.86)	6.8	0.62	0.67	0	0.52
[0.86-0.92)	7.8	1.23	2.00	0	0.52
[0.92-0.98)	8.9	3.09	0.67	0	0.52
[0.98-1.04)	10.2	3.70	2.67	0	0.52
[1.04-1.10)	11.7	12.96	5.33	4.41	7.77
[1.10-1.16)	13.5	15.43	7.33	7.35	13.99
[1.16-1.22)	15.5	16.67	14.67	8.82	17.62
[1.22-1.28)	17.8	24.69	23.33	20.59	23.83
[1.28-1.34)	20.4	7.41	12.67	14.71	12.43
[1.34-1.40)	23.4	6.79	16.67	24.26	13.99
[1.40-1.46)	26.9	4.32	8.67	8.82	4.14
[1.46-1.52)	30.9	2.47	4.67	6.62	3.11
[1.52-1.58)	35.5	0	0	2.94	1.04
>1.58	>35.5	0	0	1.47	0
	Min	3.0	6.0	11.0	7.0
	Max	32.0	32.0	43.0	38.0
	N	162	150	136	193

DUP050083268

TEH 0470450

Frequency Tables Showing Distribution of Blood Pb Levels in Los Alamos, Washington, D.C., and Port Washington

% Relative Frequency

Log_{10} Pb Interval	Interval Midpoint (µg/100g)	Los Alamos (M)	Los Alamos (F)	Washington, D.C.	Port Washington
<0.80	<6.8	0	0.52	0	0
[0.80-0.86)	6.8	0	0	0	0
[0.86-0.92)	7.8	0	1.57	0	1.01
[0.92-0.98)	8.9	0	2.62	0	1.01
[0.98-1.04)	10.2	0	3.14	0	2.02
[1.04-1.10)	11.7	7.50	12.04	2.28	16.67
[1.10-1.16)	13.5	17.50	21.46	10.05	23.23
[1.16-1.22)	15.5	17.50	25.65	15.07	16.67
[1.22-1.28)	17.8	30.00	20.94	24.20	23.74
[1.28-1.34)	20.4	11.25	3.66	16.89	6.57
[1.34-1.40)	23.4	10.00	7.85	20.55	5.55
[1.40-1.46)	26.9	5.00	0	6.39	3.03
[1.46-1.52)	30.9	0	0.52	4.57	0.50
[1.52-1.58)	35.5	1.25	0	0	0
>1.58	>35.5	0	0	0	0
	Min	11.0	6.0	11.0	8.0
	Max	38.0	29.0	33.0	29.0
	N	80	191	219	198

DUP050083269

TEH 0470451

Frequency Tables Showing Distribution of Blood Pb Levels in Greenwich Village, Chicago, and Houston

% Relative Frequency

$\log_{10}$ Pb Interval	Interval Midpoint (µg/100g)	Greenwich Village	Lombard	Bridgeport	Houston
<0.80	<6.8	0	0.48	0	0
[0.80-0.86)	6.8	0	0.48	0	2.09
[0.86-0.92)	7.8	0.71	1.44	0	6.80
[0.92-0.98)	8.9	0	1.92	0	7.32
[0.98-1.04)	10.2	2.86	3.84	1.36	13.61
[1.04-1.10)	11.7	5.71	24.51	3.40	18.84
[1.10-1.16)	13.5	21.43	25.48	13.60	19.37
[1.16-1.22)	15.5	23.58	17.78	26.53	17.80
[1.22-1.28)	17.8	19.28	17.78	23.12	8.37
[1.28-1.34)	20.4	11.43	2.40	12.24	3.66
[1.34-1.40)	23.4	10.71	1.92	14.28	2.09
[1.40-1.46)	26.9	2.86	1.44	2.04	0
[1.46-1.52)	30.9	0.71	0.48	2.04	0
[1.52-1.58)	35.5	0.71	0	0.68	0
≥1.58	>35.5	0	0	0.68	0
	Min	8.0	5.0	10.0	7.0
	Max	36.0	30.0	40.0	24.0
	N	140	208	147	191

DUP050083270

TEH 0470452

B-A

PERCENTILE		EMPIRICAL	PEARSON	NORMAL	Z
.0025			.705		
.0050			.753		
.01	1.49	.830	.803	.839	-2.326
.025	3.725	.894	.872	.894	-1.96
.050	7.45	.922	.929	.941	-1.645
.10	14.9	.998	.992	.995	-1.282
.25	37.25	1.101	1.091	1.086	-.674
.50	74.5	1.199	1.193	1.186	0
.75	111.75	1.290	1.289	1.286	.674
.90	134.1	1.366	1.371	1.377	1.282
.95	141.55	1.410	1.419	1.431	1.645
.975	145.275	1.476	1.459	1.478	1.96
.99	147.51	1.560	1.506	1.533	2.326
.995			1.537		
.9975			1.566		

TEH 0470453

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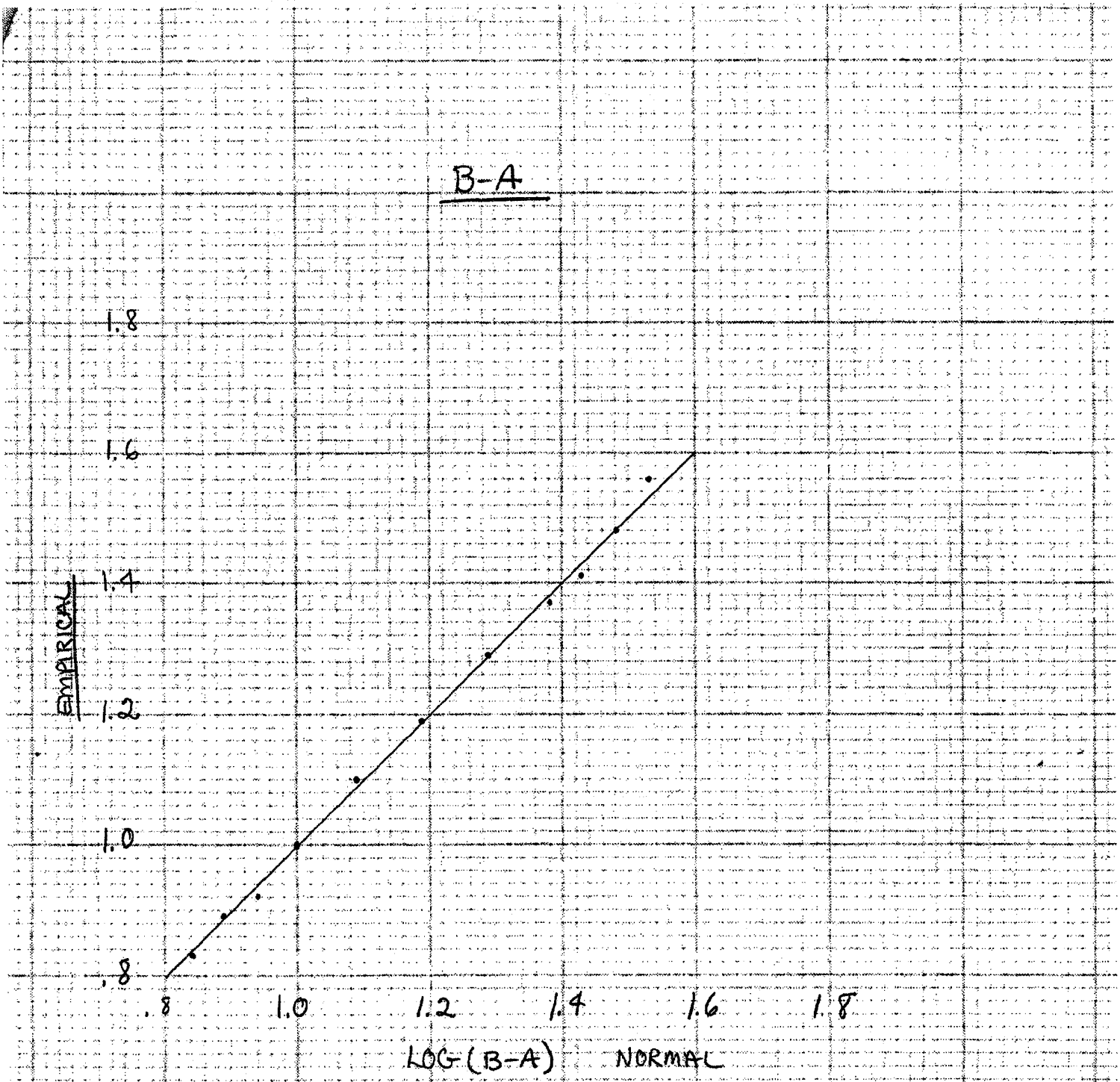

TEH 0470454

DUP050083272