

ECHA-TAMAL  
A STUDY OF COAST MIWOK ACCULTURATION

A thesis submitted to the faculty of  
San Francisco State University  
in partial fulfillment of the  
requirements for the  
degree  
Master of Arts

by

STEPHEN ALAN DIETZ

San Francisco, California

May, 1976

TABLE 25  
HORIZONTAL AND VERTICAL DISTRIBUTION OF  
CLOTHING HOOKS AND EYES

Unit	0-10 <sup>a</sup>	10-20	20-30	30-40	40-50	50-60	60-70	Totals
C14	-	-	-	-	1/1 <sup>b</sup>	-	s <sup>c</sup>	1/1 <sup>b</sup>
F 6	-	-	1	s	s	s	s	1
G 5	1	-	-	s	s	s	s	1
N 6	1	-	-	s	s	s	s	1
P 8	-	-	2 <sup>b</sup>	-	s	s	s	2 <sup>b</sup>
Q 4	-	-	1 <sup>b</sup>	-	-	s	s	1 <sup>b</sup>
X 3	-	1	-	-	s	s	s	1
CC10	-	1	-	-	s <sup>d</sup>	s	s	1
EE 1	-	-	2/1 <sup>b</sup>	-	ne <sup>d</sup>	ne	ne	2/1 <sup>b</sup>
EE 2	-	1/1 <sup>b</sup>	ne	ne	ne	ne	ne	1/1 <sup>b</sup>
EE 6	1/1 <sup>b</sup>	ne	ne	ne	ne	ne	ne	1/1 <sup>b</sup>
II 7	-	-	-	1 <sup>b</sup>	s	s	s	1 <sup>b</sup>
KK14	-	-	1	-	-	-	s	1
Totals	3/1 <sup>b</sup>	3/1 <sup>b</sup>	4/4 <sup>b</sup>	1 <sup>b</sup>	1/1 <sup>b</sup>	0	0	11/8 <sup>b</sup>

<sup>a</sup>Depth in centimeters

<sup>b</sup>Represents clothing eyes. Example: 1/1<sup>b</sup> means one hook and one eye were recovered.

<sup>c</sup>Sterile (non-midden).

<sup>d</sup>Not excavated (midden).

#### Trade Beads

Nine hundred and ten to nine hundred and thirty-four specimens. Six hundred and seventy-nine of these are unmelted beads, two hundred and thirty-one to two hundred and fifty-eight are melted beads. The range in the number of melted specimens recovered is given because of estimated quantities in melted and fused clusters.

Thirty-three distinct types of trade beads were recovered from 04-Mrn-402. All have been constructed of glass. Two basic manufacturing techniques are exhibited. The first may be termed the "drawn" method, which began when a glass blower gathered a blob of molten glass on the

end of a blowpipe and shaped it into a bubble by blowing into the opposite end of the hollow rod. A second man attached an iron rod to the bubble and, as the glassblower did, handed it to an assistant. The two assistants would then run in opposite directions, drawing out the bubble into a long, hollow tube until it was too cool to pull out further. After being laid upon a slab of wood to cool completely, the tube was broken into three foot lengths and either sold to bead makers or taken into another room to be chopped into smaller lengths to serve as beads (Kidd and Kidd 1970; Ross 1974; Sorensen and Le Roy n.d.; JPB 1856).

Embellishments could be added to these simple drawn monochromes by a number of processes. During the drawing-out procedure, the tube could be twisted to create a spiraled effect (Kidd and Kidd 1970), or, after being cut into bead lengths, the short glass tubes could be put into an ash and sand filled iron drum which was slowly turned over a fire. Through this tumbling procedure, the sharp jagged ends of the beads would become smooth and rounded (Kidd and Kidd 1970; Sorensen and LeRoy n.d.).

The initial bubble of glass, before being drawn, could also be "marvered". This was done on a marver, or wood board. The bubble of soft glass was laid on the board and paddled to give it a triangular, square, or other shape in cross section. If the marver was corrugated, the bubble could be rolled over it to press the corrugated design into its exterior surface. The bubble was then drawn out in the usual manner (Kidd and Kidd 1970).

Stripes could be added to the exterior surface of beads by introducing the initial bubble into a pail-like container which had rods or canes of a single or various colors arranged vertically around its

inside wall. The bubble was expanded by the glassblower until the rods adhered to it. It was then taken from the pail to a furnace and heated so that the rods would coalesce with the bubble's surface. The resulting mass was then drawn (*Ibid*).

Polychrome or beads with different layered colors were made by dipping the original monochrome bubble into another pot of molten glass. Two or more colors could be used, and some beads have as many as five or six different colored layers (*Ibid*).

Facets could be produced on a bead by physically grinding away glass from its outside surfaces (Kidd and Kidd 1970; Ross 1974).

All of the above embellishments can be found within the drawn beads of the 04-Mrn-402 collection.

The second manufacturing technique exhibited in the specimens from Echa-tamal is that used in making "wire wound" beads. A rod or stick of glass was heated until one of its ends became molten. A thin thread of glass was started from the end of the rod or stick, attached to a chalk coated wire, and wound around the wire as it rotated. The thread was wound until a bead of the desired size and shape was built up (Kidd and Kidd 1970; Sorensen and LeRoy n.d.). As with the drawn beads, wire wound beads could be decorated further by layering, grinding, or molding. Hole sizes on these beads will conform to the diameter of the wire used. Beads manufactured by this method are usually spherical or barrel-shaped in their length.

The types of trade beads excavated from 04-Mrn-402 are as follows. The initial description of each type is based upon the observable techniques that were used in the manufacturing of the beads. Colors given

have been taken from the *Methuen Handbook of Colour* (1967). This book also contains Munsell equivalents which are provided below. Metrics for all of the trade beads taken from 04-Mrn-402 are given in Appendix 5 of this thesis.

Type 1.—Drawn, untumbled, plain (no stripes), unmarvered, untwisted monochrome. Color: Clear. Total number of specimens: 1. General description: Clear cylinder with the ends snapped off.

Type 2.—Drawn, untumbled, plain, marvered, untwisted, unground monochrome. Color: Clear. Total number of specimens: 1. General description: Six sided tube with the ends snapped off. Woodward refers to this type as "O.P." beads or "bugle" beads (1965:10). He states that they were very popular during the period from 1830 to 1870 A.D. and have been found ". . . from Alaska and western Canada, through the Upper Plains country and the full length of the San Joaquin Valley in California, the heaviest concentration of them being in the upper part of the San Joaquin and the adjacent foothills" (*Ibid*).

Type 3.—Drawn, untumbled, plain, marvered, untwisted, ground monochrome. Color: Methuen 20 E8, Munsell 7PB 2/10. Lapis Lazuli. Total number of specimens: 3. General description: Small translucent faceted bead which has six flat surfaces around its outside with half diamonds ground at the ends to create a faceted effect. The ends have been snapped off. This kind of bead is often called a "Russian Blue" in reference to a type of bead traded by the Russian-American Fur Company along the northwest coast during the late 1700's and early 1800's. As has been pointed out by Sorensen and Le Roy (n.d.:45), however, beads of this type were not exclusively traded by one company as they are found in most of the western states of the U.S. The Meighan collection of trade beads at the Lowie

Anthropology Museum of the University of California, Berkeley, indicates these beads as Type 146 if larger than 5mm. in size, and Type 147 if less than 5mm. in size.

Type 4.—Drawn, untumbled, plain, marvered, untwisted, ground, monochrome. Color: Clear. Total number of specimens: 2. General description: Same as Type 3, above. Sorensen and LeRoy (n.d.:46) believe that beads similar to this type probably date to ca. 1840. These beads correspond to the Meighan collection's Type 161 (larger than 5.0mm. and less than 8.0mm. in diameter) and Type 162 (larger than 8.0mm. and less than 11.0mm. in diameter).

Type 5.—Drawn, untumbled, plain, marvered, untwisted, ground, monochrome. Color: Black. Total number of specimens: 4. General description: These are also small translucent faceted beads with six flat surfaces and ground half diamonds on their ends which create a faceted effect. The ends have been snapped off. These beads correspond to the Meighan collection's Type 381.

Type 6.—Drawn, tumbled, plain, unmarvered, untwisted, unground, monochrome. Color: Methuen 1 A1, Munsell 9.0/-. White. Total number of specimens: 152 to 156. Range given because of estimated numbers in fused clusters. General description: These are opaque white beads which are commonly known as "pony, China, or quartz" beads. Sorensen and LeRoy (n.d.:42) ascribe a date as early as 1600 A.D. for this type in North America, and Woodward (in Woolfenden 1970:51) states that they were widely distributed during the early 1800's. The Meighan collection shows these beads as Types 52, 178, 184, 187, 233, 234, and 363, depending on the size and whether or not they are pure or milky white.

Type 7.—Drawn, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 9 D8, Munsell 8R 4/9. Reddish Brown. Total number of specimens: 2. General description: Small opaque reddish brown bead. Has been smoothed and rounded on the ends by tumbling. Corresponds to Meighan collection's type 107.

Type 8.—Drawn, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Clear with a translucent gold tint or patina. Number of specimens: 1. General description: Small translucent bead. Has been rounded and smoothed by tumbling. May be the same as the Meighan collection's type 241.

Type 9.—Drawn, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Clear. Total number of specimens: 1. General description: Small translucent bead; has been rounded and smoothed on its ends by tumbling. Corresponds to Meighan collection's type 177.

Type 10.—Drawn, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Black. Total number of specimens: 3. General description: Black opaque bead. Has been rounded and smoothed on ends by tumbling. Similar to Type 222 of the Meighan collection.

Type 11.—Drawn, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 26 D6, Munsell 5G 5/5. Greyish Green. Total number of specimens: 1. General description: Very small translucent green bead. Has been rounded by tumbling.

Type 12.—Drawn, tumbled, striped, unmarvered, untwisted, unground monochrome. Color: Methuen 20 C8, Munsell 7Pb 3/14. Princess Blue. Stripes are Methuen 1 A1, Munsell - 9/- . White. Total number of specimens: 6. General description: Dark blue translucent bead with twenty-

five white stripes that run its length. Ends have been rounded and smoothed by tumbling. Corresponds to Type 346 of the Meighan collection.

Type 13.—Drawn, tumbled, striped, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen L A1, Munsell -/9-. White.

Outer layer is also white. Stripes are Methuen 9 D8, Munsell 8R 4/9

(Reddish Brown) and Methuen 21 B5, Munsell 6BP 6/7 (Greyish Blue). Total

number of specimens: 1. General description: White opaque bead with two red and two blue stripes along its length. Sorensen and Le Roy

refer to these kinds of trade beads as "candy stripes" and are said to

be "very early to quite recent" types (n.d.:42). The Meighan collection

has a number of striped beads like this specimen but with different

colored stripes. The type numbers are 190, 191, 192, and 193.

Type 14.—Drawn, untumbled, plain, marvered, untwisted, ground polychrome.

Color: Inner layer is Methuen 20 E8, Munsell 7PB 2/10 (Lapis

lazuli) and the outer layer is Methuen 20 E8, Munsell 7PB 2/10 (Lapis

lazuli). Total number of specimens: 1. General description: Like Type

3, above, but has seven flat surfaces and a thin white layer between the

inner and outer layers. Corresponds to Type 145 of the Meighan collection.

tion.

Type 15.—Drawn, untumbled, plain, marvered, untwisted, ground polychrome.

Color: Inner layer is Methuen 1 A1, Munsell - 9/- (white)

and the outer layer is Methuen 20 E8, Munsell 7PB 2/10 (Lapis Lazuli).

Total number of specimens: 1. General description: Like Type 3, above, but has a thin white inner layer.

Type 16.—Drawn, tumbled, plain, unmarvered, untwisted, unground polychrome.

Color: Inner layer is Methuen 1 A1, Munsell - 9/- (White) and



the outer layer is also Methuen 1 A1, Munsell - 9/- (White). Total number of specimens: 513 to 532. Range given because of estimated numbers in melted clusters. General description: A two layered white opaque bead. Both layers are white although the outer layer on some specimens exhibits a very slight green tint or appears to be somewhat translucent. Depending on the diameter and shape (roundish or tubular), these beads correspond to the Meighan collection's Types 180, 234, 301, 364, 365, 366, 367, 368, and 369.

Type 17.—Drawn, tumbled, plain, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen 1 C7, Munsell 1GY 7/7 (Greyish Green), and the outer layer is Methuen 10 C8, Munsell 7R 4/11 (Dark Red). Total number of specimens: 95 or 96. Range given because of estimated numbers in melted clusters. General description: Red opaque bead with a translucent green core that at times appears to be black. This type is generally known as the Cornaline d'Allepo bead which is "so named because it was associated with the Italian export business with the city of Allepo in the Near East" (Woodward 1965:19). This form of d'Allepo is known to be an earlier type distributed from the 17th century to the early 1800's (Sorensen and Le Roy n.d.:42; Woodward 1965:19). These beads are represented as Types 103, 104, 105, and 106 in the Meighan collection.

Type 18.—Drawn, tumbled, plain, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen 1 A1, Munsell - 9/- (White), and the outer layer is Methuen 10 C8, Munsell 7R 4/11 (Deep or Dark Red). Total number of specimens: 54. General description: Red opaque bead with a white core. Has been rounded and smoothed by tumbling. This is

another form of the Cornaline d'Allepo (see type 17, above) which is also known as "white hearts", "under whites", "late Hudson's Bay", and "California trade beads" (Sorensen and Le Roy n.d.:44). Restricted for the most part to western trade, Woodward (in Woolfenden 1970:53) cites an 1847 order for "Cordalina beads" by Thomas O. Larkin, American Consul in Monterey, as being a date for their introduction to California. These correspond to Types 98, 99, 100 of the Meighan collection.

Type 19.—Drawn, tumbled, plain, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen 1 D1, Munsell - 6/- (Platinum), and the outer layer is Methuen 22 E5, Munsell 4PB 4/5 (Dull Blue).

Total number of specimens: 1. General description: Blue opaque bead with a light grey core. Has been tumbled to smooth and round the ends.

Type 20.—Drawn, tumbled, plain, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen 1 B1, Munsell - 8/- (Pale Grey), and the outer layer is Methuen 23 B3, Munsell 2PB 7/3 (Baby Blue).

Total number of specimens: 1. General description: Same as Type 19, above, with the exception of the colors.

Type 21.—Drawn, tumbled, striped, unmarvered, untwisted, unground polychrome. Color: Inner layer is Methuen 22 A7, Munsell 5PB 5/11 (Blue), and the outer layer is Methuen 1 A1, Munsell - 9/- (White). The stripes are Methuen 5 E6, Munsell 9YR 4/4 (Mustard Brown). Total number of specimens: 3. General description: Opaque white bead with a blue core and four equally spaced mustard brown stripes along its length. Corresponds to Types 190, 191, 192, and 193 of the Meighan collection.

Type 22.—Drawn, tumbled, plain unmarvered, untwisted, unground, monochrome. Color: Methuen 23 D6, Munsell 1PB 4/6. Greyish Blue. Total

number of specimens: 1. General description: Light blue translucent bead. Ends have been smoothed and rounded through tumbling. This bead corresponds to Type 357 of the Meighan collection.

Type 23.—Wire wound, untumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 24 B7, Munsell 4B 5/7. Capri Blue or Turquoise. Total number of specimens: 5. General description: Small blue wire wound bead which tapers toward either end. Corresponds to Type 345 of the Meighan collection.

Type 24.—Wire wound, untumbled, plain, unmarvered, untwisted, unground monochrome. Color: Black. Total number of specimens: 1. General description: Large cigar-shaped black translucent bead.

Type 25.—Wire wound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 27 D7, Munsell 1G 5/6. Peacock Green. Total number of specimens: 5. General description: Small green translucent bead. Has been rounded and smoothed by tumbling. Type 224 of the Meighan collection.

Type 26.—Wire wound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 10 B8, Munsell 7R 4/14. Red. Total number of specimens: 7. General description: Small red translucent bead. Of interest is the fact that the holes in every specimen are off center, perhaps indicating a specific use for application to materials. Type 230 and 354 of the Meighan collection.

Type 27.—Wire wound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 26 E6, Munsell 6G 4/4. Dark Green. Total number of specimens: 1. General description: Green translucent bead that is donut-shaped in cross section. Has been rounded by tumbling.

Corresponds to Type 416 of the Meighan collection, but this specimen is smaller in overall size.

Type 28.—Wire wound, untumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 20 E8, Munsell 7PB 2/10. Lapis lazuli.

Total number of specimens: 7. General description: Globular translucent blue bead. These tend to be teardrop shaped in cross section.

Type 270 of the Meighan collection.

Type 29.—Wire wound, untumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 20 E8, Munsell 7PB 2/10. Lapis lazuli.

Total number of specimens: 5. General description: Small translucent blue bead with a donut-shaped cross section.

Type 30.—Wire wound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 24 C8, Munsell 3B 4/8. Ice Blue. Total number of specimens: 3. General description: Large round translucent blue bead.

Type 31.—Wirewound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 1 A1, Munsell - 9/-. White. Total number of specimens: 2. General description: Round opaque white bead. Has been rounded and smoothed through tumbling. Meighan collection Type 350.

Type 32.—Wire wound, tumbled, plain, unmarvered, untwisted, unground monochrome. Color: Methuen 10 B8, Munsell 7R 4/14. Red. Total number of specimens: 1. General description: Red translucent globular bead. Has been tumbled to smooth and round the ends. Slightly teardrop shaped in cross section. Corresponds to Type 54 or 55 of the Meighan collection.

Type 33.—Wire wound, untumbled, plain, unmarvered, untwisted, unground

polychrome. Color: Outer layer is Methuen 14 E8, Munsell 9P 2/6 (Dark Purple), and the inner layer is Methuen 1 A1, Munsell - 9/- (White). Total number of specimens: 2. General description: Dark purple translucent bead. Barrel-shaped in cross section. Has an inner layer of white which has swirled into the outer layer of purple. Corresponds to Type 60 of the Meighan collection.

TABLE 26

HORIZONTAL AND VERTICAL DISTRIBUTION OF  
MELTED AND FUSED GLASS TRADE BEADS

Unit	0-10 <sup>a</sup>	10-20	20-30	30-40	40-50	50-60	60-70	Totals
C14	-	-	-	1	3	3	s <sup>b</sup>	7
F 6	7	-	-	s	s	s	s	7
G 5	2	15	-	s	s	s	s	17
I 8	-	-	1	2	-	-	-	3
N 6	1	1	-	s	s	s	s	2
O 7	2	-	-	s	s	s	s	2
P 8	-	2	-	-	s	s	s	2
R 1	-	-	4	-	-	s	s	4
X 3	1	7	-	3	s	s	s	11
X13	-	1	-	ne <sup>c</sup>	ne	ne	ne	1
Y 6	-	-	4	5	s	s	s	9
CC10	-	1	-	-	s	s	s	1
DD14	-	2	-	-	s	s	s	2
EE 2	22-30 <sup>d</sup>	-	ne	ne	ne	ne	ne	22-30
EE 5	3	ne	ne	ne	ne	ne	ne	3
EE 6	18-20	ne	ne	ne	ne	ne	ne	18-20
EE 9	2	-	ne	ne	ne	ne	ne	2
EE10	14-16	4	ne	ne	ne	ne	ne	18-20
EE14	-	3	ne	ne	ne	ne	ne	3
FF 3	-	5	-	ne	ne	ne	ne	5
HH 9	-	-	10	s	s	s	s	10
II 7	-	6-7	36-47	-	s	s	s	42-54
JJ15	-	-	1	-	-	-	s	1
KK14	-	2	-	-	-	-	-	2
MM 5	-	-	4	7-10	s	s	s	11-14
Totals	72-84	49-50	60-71	18-21	3	3	0	218-245

<sup>a</sup>Depth in centimeters

TABLE 26--Continued

<sup>b</sup>Sterile (non-midden).<sup>c</sup>Not excavated (midden).<sup>d</sup>Ranges given because of estimated numbers in melted and fused clusters.<sup>e</sup>Total does not include 13 specimens with no catalogue numbers

TABLE 27

HORIZONTAL AND VERTICAL DISTRIBUTION OF  
UNMELTED AND UNFUSED GLASS TRADE BEADS

Unit	0-10 <sup>a</sup>	10-20	20-30	30-40	40-50	50-60	60-70	Totals
C14	-	6	3	4	3	2	s <sup>b</sup>	18
D15	-	2	-	ne <sup>c</sup>	ne	ne	ne	2
F 6	-	4	1	s	s	s	s	5
G 5	8	2	2	s	s	s	s	12
H 3	-	1	-	-	-	-	ne	1
I 8	2	3	-	1	4	4	-	14
J 4	-	-	1	1	2	-	4	8
K 6	-	3	3	2	-	-	-	8
M10	7	1	s	s	s	s	s	8
N 6	14	7	-	s	s	s	s	21
O 7	2	1	-	s	s	s	s	3
P 8	1	2	6	1	s	s	s	10
Q 4	2	2	1	4	2	s	s	11
R 1	3	3	3	2	-	s	s	11
S14	-	2	1	-	s	s	s	3
V13	4	2	s	s	s	s	s	6
X 2	-	3	ne	ne	ne	ne	ne	3
X 3	7	7	2	2	s	s	s	18
X13	15	14	-	ne	ne	ne	ne	29
X14	2	-	-	ne	ne	ne	ne	2
Y 6	8	10	8	4	s	s	s	30
BB11	-	5	-	s	s	s	s	5
CC10	1	6	1	-	s	s	s	8
DD14	2	2	2	-	s	s	s	6
EE 1	1	12	14	9	ne	ne	ne	36
EE 2	20	12	ne	ne	ne	ne	ne	32
EE 5	20	-	ne	ne	ne	ne	ne	20
EE 6	51	ne	ne	ne	ne	ne	ne	51
EE 9	24	23	21	ne	ne	ne	ne	68
EE10	14	10	ne	ne	ne	ne	ne	24
EE14	8	26	ne	ne	ne	ne	ne	34
FF 3	5	17	5	ne	ne	ne	ne	27
HH 9	-	-	1	s	s	s	s	1

TABLE 27--*Continued*

Unit	0-10 <sup>a</sup>	10-20	20-30	30-40	40-50	50-60	60-70	Totals
II 7	7	12	5	2	s	s	s	26
JJ15	-	4	13	9	1	-	s	27
KK14	3	12	24	9	2	4	-	54
MM 5	2	3	7	2	s	s	s	14
Totals	240	219	124	52	14	10	4	663 <sup>d</sup>

<sup>a</sup>Depth in centimeters.

<sup>b</sup>Sterile (non-midden).

<sup>c</sup>Not excavated (midden).

<sup>d</sup>This total does not include 1 bead with no catalogue number, 5 beads with no unit or depth given in the catalogue, 3 beads listed in the catalogue as another artifact type, and 7 beads collected from the surface of the site.

#### Buttons

Sixty-one specimens. Fifty-eight were excavated from Units, three were collected from the surface of the site. The majority of the buttons from 04-Mrn-402 were probably used for the simple task of fastening clothing. There are, however, a number of buttons within the collection which have been clearly established as trade items. These include two Phoenix buttons and two United States military specimens. The buttons are presented according to the material used in their manufacture. Measurements given include diameter (diameter of the whole button), hole diameter (average diameter of all thread holes), threadwell diameter (diameter of concave depression in button face which contains the thread holes), material thickness (thickness of the button material), and height (overall thickness of the button from front to back). See Figures 15 and 16.

Ceramic.—Thirty-five specimens. Also called china, opaque glass, and porcelain, fired ceramic buttons were in common use in England and France

APPENDIX V - SUMMARY OF DATA  
FOR GLASS BEADS

pp. 229 - 248

Due to its length, the Appendix is not  
provided here.

