

## QUIPU AS98

Museum identification: No. VA16136 (Museum Für Völkerkunde, Berlin)

Main cord: color LB

- \$\* 69.0 cm: group of 6 pendant cords (1-6), then space of 2.5 cm.  
 73.0 cm: group of 5 pendant cords (7-11), then space of 2.0 cm.  
 76.0 cm: group of 5 pendant cords (12-16), then space of 2.0 cm.  
 79.0 cm: group of 6 pendant cords (17-22), then space of 2.0 cm.  
 82.0 cm: group of 5 pendant cords (23-27), then space of 2.0 cm.  
 85.0 cm: group of 5 pendant cords (28-32), then space of 2.0 cm.  
 88.0 cm: group of 6 pendant cords (33-38), then space of 2.0 cm.  
 91.0 cm: group of 5 pendant cords (39-43), then space of 2.0 cm.  
 94.0 cm: group of 5 pendant cords (44-48), then space of 2.0 cm.  
 97.0 cm: group of 6 pendant cords (49-54), then space of 2.0 cm.  
 100.0 cm: group of 5 pendant cords (55-59), then space of 1.5 cm.  
 102.5 cm: group of 5 pendant cords (60-64), then space of 1.5 cm.  
 105.0 cm: group of 6 pendant cords (65-70), then space of 2.0 cm.  
 108.0 cm: group of 5 pendant cores (71-75), then space of 2.0 cm.  
 111.0 cm: group of 5 pendant cords (76-80), then space of 120.0 cm.  
 232.0 cm: end b

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
1	1s(7.0); 1s(15.0)	15.0b	DB	1(1+)?	
2	--	36.5ç	W	0	
3	--	34.5ç	W	0	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
4	--	35.5¢	W	0	
5	--	35.5¢	W	0	
6	--	34.5¢	W	0	
7	6s(8.0)	24.0¢	W	60	2:0.0-0.5
7s1	1s(8.0); 1E(15.5)	24.0¢	DB	11	
7s2	3L(14.5)	27.0¢	W	3	
8	--	28.5¢	GG	0	
9	--	33.0¢	W	0	
10	1s(7.0); 4L(14.5)	25.0¢	LB:W	14	
11	--	30.0b	W	0	
12	5s(8.5)	31.5¢	W	50	2:0.0-0.5
12s1	1s(8.5)	27.0¢	DB	10	
12s2	3L(14.0)	28.0	W	3	
13	--	29.5¢	GG	0	
14	--	36.5¢	W	0	
15	1s(8.0); 3L(15.5)	26.0¢	LB:W	13	
16	--	34.5¢	W	0	
17	1s(7.0); 2s(15.0); 9L(24.0)	32.5¢	DB	129	
18	--	28.0¢	W	0	
19	--	29.0¢	W	0	
20	--	28.5¢	W	0	
21	--	28.5¢	W	0	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
22	--	34.5	W	0	
23	5s(8.5)	32.0¢	W	50	2:0.0-0.5
23s1	1s(8.0); 1E(15.5)	25.5¢	DB	11	
23s2	4L(14.5)	32.5¢	W	4	
24	--	29.0¢	GG	0	
25	1s(7.0)	31.0¢	W	10	
26	1s(8.0); 1E(16.0)	25.5¢	LB:W	11	
27	--	34.0¢	W	0	
28	5s(8.5)	25.5¢	W	50	2:0.0-0.5
28s1	1s(7.0); 1E(14.5)	25.0¢	DB	11	
28s2	3L(14.5)	31.0¢	W	3	
29	--	29.0¢	GG	0	
30	5L(15.0)	28.5¢	W	5	
31	1s(7.0)	26.5¢	LB:W	10	
32	--	36.5¢	W	0	
33	1s(6.5); 1s(18.5); 6L(31.5)	51.0¢	DB	116	
34	--	34.0¢	W	0	
35	--	32.5¢	W	0	
36	--	35.5¢	W	0	
37	--	32.5¢	W	0	
38	--	36.5¢	W	0	
39	5s(7.5)	29.5¢	W	50	2:0.0-0.5

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
39s1	7L(14.5)	19.0¢	DB	7	
39s2	3L(15.5)	25.5¢	W	3	
40	--	18.0b	GG	0	
41	1s(7.5)	35.0¢	W	10	
42	1s(7.5)	26.5¢	LB:W	10	
43	--	33.0¢	W	0	
44	5s(7.5)	31.0¢	W	50	2:0.0-0.5
44s1	6L(15.0)	23.5¢	DB	6	
44s2	3L(16.0)	27.5¢	W	3	
45	--	28.5¢	GG	0	
46	1s(8.0)	34.5¢	W	10	
47	5L(14.5)	22.0¢	LB:W	5	
48	--	34.0¢	W	0	
49	1s(7.0); 1s(14.0); 8L(22.5)	34.0¢	LB	118	
50	--	28.5¢	LB	0	
51	--	27.5¢	LB	0	
52	--	27.5¢	LB	0	
53	--	28.5¢	LB	0	
54	--	28.0¢	LB	0	
55	5s(10.5)	23.5¢	LB	50	2:0.0-0.5
55s1	6L(13.5)	20.5¢	LB	6	
55s2	3L(15.5)	24.0¢	LB	3	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
56	1E(15.0)	26.0¢	GG	1	
57	1s(7.5)	37.0¢	LB	10	
58	8L(14.5)	20.0¢	LB:W	8	
59	--	29.5¢	LB	0	
60	5s(10.5)	22.0¢	LB	50	2:0.0-0.5
60s1	6L(14.0)	21.5¢	LB	6	
60s2	3L(13.5)	24.5¢	LB	3	
61	2L(15.0)	29.5	GG	2	
62	6L(13.5)	32.5¢	LB	6	
63	--	18.0b	LB:W	?	
64	--	30.0¢	LB	0	
65	6s(13.0)	18.5b	DB	6?	
66	--	27.5¢	LB	0	
67	--	27.5¢	LB	0	
68	--	26.5¢	LB	0	
69	--	28.0¢	LB	0	
70	--	30.0¢	LB	0	
71	3s(10.5)	25.5¢	LB	30	2:1.5-2.0
71s1	1s(9.0)	26.5¢	LB	10	
71s2	3L(14.5)	25.0¢	LB	3	
72	6L(9.0)	24.0¢	GG	6	1:0.5
72s1	2L(9.0)	28.0¢	DB:GG	2	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
73	2s(10.0); 3L(17.0)	28.5¢	LB	23	
74	8L(15.5)	19.5¢	LB:W	8	
75	--	28.0¢	LB	0	
76	2s(10.0)	23.5¢	LB	20	1:0.5
76s1	3L(15.5)	24.5¢	LB	3	
77	2L(9.0)	26.5¢	GG	2	1:0.5
77s1	2L(11.0)	30.5¢	DB:GG:W	2	
78	1s(10.5)	39.0¢	LB	10	
79	4L(16.0)	23.0¢	LB:W	4	
80	--	27.0¢	LB	0	

#### Observations

- 1.\* Construction note: The main cord begins with a woven cord ball. The ball is DB, 1.0 cm. thick, and 1.5 cm. long.
2. AS98, AS108, AS113, AS114, AS159, AS160, AS173, and AS174 were acquired by the Museum in 1904 with provenance between Ica and Pisco. For a discussion of them, see #5 below.
3. By spacing, the quipu is separated into 15 groups. The 15 groups form 5 sets of 3 groups each. The first group in each set has 6 pendants and the other 2 groups have 5 pendants each. The first group in each set has one color pattern and the other 2 have another color pattern. Thus, the 15 groups can be represented by  $XYXYXYXYXYX^{\prime}Y^{\prime}X^{\prime}Y^{\prime}Y^{\prime}$ .

Each X or X' group has 6 pendants; each Y or Y' group has 5 pendants. An X group has the color pattern DB, 5W and a Y group is W(with subsidiaries of

DB and W), GG, W, LB:W, W. With 1 exception, wherever DB or W cords occur in X and Y groups, LB occurs in X' and Y' groups. The X and X' groups have no subsidiaries. The Y groups have subsidiaries in the first position only, while in Y' groups, there are also subsidiaries in the second position.

4. In all X or X' groups, positions 2-6 are zero-valued (or blank). The value in position 1 is probably the sum of the values on the pendants and subsidiaries in the corresponding position in the 2 following groups. (Two sums are exact, 1 has a discrepancy of 3, and 2 cords are broken but what remains of them does not contradict the idea.) In all pairs of Y or Y' groups, any position that is zero-valued is zero-valued in both of them.
5. Discussion of AS98, AS108, AS113, AS114, AS159, AS160, AS173, AS174:
  - a) AS159 and AS160 are loosely tied together. Also, AS173 and AS174 are loosely tied together.
  - b) AS114, AS159, AS160, AS173, AS174 have some similarities to each other.
    - (i) AS114 and AS160 share a distinctive color (CB) and AS114 and AS174 share a distinctive color (GØ).
    - (ii) AS114, AS159, AS173, and AS174 have multiple unit values and knots of type EE appear on both AS159 and AS174.
    - (iii) Most remarkably, some of the values on AS159, AS173, and AS174 are related.

Seven consecutive pendants on AS159 and AS173 have the same values.

<u>AS159</u>		<u>AS173</u>
P1=1, P1s1=18&2 both color W		P2=1, P2s1=18&2 both color W
P2-P7 are 16&1, 16, 16, 18, 12, 16		P3-P8 are 16&1, 16, 16, 18, 12, 16

These values, or their sums, also appear on AS174. P3-P8 on AS173 are the second group of pendants. The group sums to 94&1 with the first 3 summing to 48&1 and

the next 3 to 46. On AS174 the sum of the second pendant in each of the 6 pairs also is 94&1. Subsums of them are also 48&1 and 46.

AS174

$$\left. \begin{array}{l} \sum_{i=1}^2 P_{i2} = 48&1 \\ \sum_{i=3}^6 P_{i2} = 46 \end{array} \right\} \sum_{i=1}^6 P_{i2} = 94&1; P_1 = 94&1$$

$P_{i2}$  is the second pendant in the  $i$ th pair.

AS173

$$\left. \begin{array}{l} \sum_{i=1}^3 P_{2i} = 48&1 \\ \sum_{i=4}^6 P_{2i} = 46 \end{array} \right\} \sum_{i=1}^6 P_{2i} = 94&1$$

$P_{2i}$  is the  $i$ th pendant in the second group.

The value 18&2 also appears on AS174 and is the sum of the subsidiaries of the first pendant in the  $i$ th pair. ( $P_{i1} = 18&2$  and is color W;

$$\sum_{i=1}^6 P_{i1} = 18&2$$