

QUIPU AS48

Museum identification: No. R2700 (Museo Amano, Lima, Peru)

Main Cord: color B connected to DB:W (§ends hooked together)

(B) ç 11.0: end §

(DB:W) § 11.5 cm: group of 8 pendant cords (1-8), then space of 3.0 cm.
 15.0 cm: group of 4 pendant cords (9-12), then space of 3.0 cm.
 20.0 cm: group of 4 pendant cords (13-16), then space of 3.5 cm.
 24.5 cm: group of 4 pendant cords (17-20), then space of 3.0 cm.
 28.5 cm: group of 4 pendant cords (21-24), then space of 2.0 cm.
 31.5 cm: group of 4 pendant cords (25-28), then space of 2.0 cm.
 34.5 cm: group of 4 pendant cords (29-32), then space of 3.0 cm.
 38.5 cm: group of 4 pendant cords (33-36), then space of 4.5 cm.
 44.0 cm: group of 4 pendant cords (37-40), then space of 2.0 cm.
 46.5 cm: group of 4 pendant cords (41-44), then space of 2.0 cm.
 49.5 cm: group of 4 pendant cords (45-48), then space of 1.5 cm.
 52.0 cm: group of 4 pendant cords (49-52), then space of 60.0 cm.
 112.5 cm: end ç

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
1	6L(16.0)	27.0ç	W	6	1:13.0
1s1	1E(4.5)	10.5ç	W	1	
2	6L(16.0)	27.5ç	W	6	
3	6L(15.5)	24.0ç	W	6	
4	9L(14.5)	28.0ç	W	9	1:17.0
4s1	1E(3.5)	7.5ç	B	1	
5	8L(13.5)	22.0ç	W	8	1:12.0
5s1	1E(3.0)	9.0ç	W	1	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
6	6L(14.5)	24.5¢	W	6	1:16.5
6s1	1E(3.0)	7.0¢	DB	1	
7	7L(14.5)	22.0¢	DB:W	7	
8	8L(13.0);3L(18.0)	27.0¢	W	8&3	2:8.5
8s1	1E(5.5)	7.5¢	DB	1	
8s2	1E(2.5)	6.5¢	W/B ¹	1	
9	1E(8.5)	13.5¢	B	1	
10	1s(3.0);7L(11.5)	16.5¢	W	17	2:7.0,11.5
10s1	1E(2.5)	4.5¢	W	1	
10s2	1E(3.0)	9.0¢	DB	1	
11	2L(10.0)	25.0¢	W	2	2:10.0, 15.0
11s1	3L(2.5)	6.5¢	RB	3	
11s2	1E(3.0)	6.0¢	BL:B	1	
12	4L(10.5)	19.5¢	W	4	
13	1E(9.5)	15.0¢	B	1	
14	6L(11.0)	17.0¢	W	6	2:10.5,11.0
14s1	1E(4.0)	10.0¢	B	1	
14s2	1E(2.0)	4.0¢	W	1	
15	1E(9.5)	20.5¢	W	1	
16	1E(9.5)	21.5¢	W	1	
17	1E(6.5)	21.5¢	B	1	
18	1s(2.0);6L(8.5)	19.0¢	W	16	
19	1E(8.0)	21.0¢	W	1	1:7.5
19s1	2L(2.0)	9.0¢	RB	2	
20	7L(9.0)	22.0¢	W	7	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
21	-	15.0¢	B	0	
22	1s(3.0); 3L(10.0)	25.0¢	W	13	1:9.0
22s1	1E(5.0)	10.0¢	DB	1	
23	4L(11.0)	25.0¢	W	4	2:9.5,11.0
23s1	1E(5.5)	12.5¢	BL	1	
23s2	2L(1.0)	7.5¢	RB	2	
24	4L(11.5)	21.5¢	W	4	
25	1E(8.5)	13.5¢	B	1	
26	7L(9.0)	18.5¢	W	7	2:8.5,9.0
26s1	1E(3.5)	5.5¢	B	1	
26s2	1E(4.5)	12.5¢	DB:B	1	
27	1E(11.0)	26.0¢	W	1	
28	1E(10.0)	21.0¢	W	1	
29	1E(7.0)	15.0¢	B	1	
30	1s(3.5);5L(10.5)	20.0¢	W	15	1:10.5
30s1	2L(2.0)	8.0¢	B	2	
31	1E(9.5)	25.5¢	W	1	2:9.0,9.5
31s1	1E(3.0)	8.0¢	RB	1	
31s2	1E(4.0)	12.0¢	DB:B	1	
32	1E(10.0)	22.0¢	W	1	
33	1E(8.5)	15.5¢	B	1	
34	1s(3.0);3L(9.0)	24.0¢	W	13	2:7.5,8.5
34s1	7L(3.0)	13.0¢	B	7	
34s2	2L(2.0)	7.0¢	W/B ¹	2	
35	-	25.5¢	W	0	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
36	-	22.0¢	W	0	
37	1E(6.5)	11.5¢	B	1	
38	2L(9.0)	19.0¢	W	2	1:8.0
38s1	1E(1.0)	2.0¢	W	1	
39	-	23.0¢	W	0	
40	-	25.0¢	W	0	
41	1E(6.0)	12.0¢	B	1	
42	6L(9.5)	19.0¢	W	6	
43	4L(10.5)	18.0¢	W	4	
44	1E(10.5)	26.5¢	W	1	
45	1E(9.5)	16.0¢	B	1	
46	5L(10.5)	23.0¢	W	5	1:11.0
46s1	2L(4.0)	12.0¢	W/B ¹	2	
47	-	33.0¢	W	0	1:17.0
47s1	1E(3.0)	5.5¢	B/W ¹	1	
48	2L(9.0)	26.0¢	W	2	
49	1E(5.5)	8.5¢	B	1	
50	7L(11.0)	18.5¢	W	7	1:14.0
50s1	1E(5.0)	8.0¢	DB:B	1	
51	3L(11.0)	26.0¢	W	3	1:15.0
51s1	1E(6.5)	11.5¢	B	1	
52	4L(11.0)	23.0¢	W	4	

Observations

1. On cords P8s2, P34s2, and P47s1, the color change is at 2.5 cm. On P46s1 it is at 6.0 cm.
2. AS48 and AS49 were excavated by University of Tokyo 1958 expedition, La Centinela, Tambo de Mora. The work is described in *Andes*, The University of Tokyo Expedition 1958, Report 1, pp. 225-226. The Museum has several associated fragments of pottery.
3. The quipu has 12 groups by spacing. The last 11 groups each have 4 pendants and the same color pattern (B, W, W, W). For all 11 groups:
 - (i) positions 1 and 4 have no subsidiaries.
 - (ii) position 2 has the maximum value. With the exception of the last group,

$$P2 \geq P1 + P3 + P4.$$
 - (iii) the values on pendants and subsidiaries are each 17 or less. Only 0, 1 appears in position 1; 0-4 in position 3; 0-2, 4, 7 in position 4; and 1,2,3,7 on subsidiaries.
4. The values on pendants in group 1 are between 6 and 11, and all 6 subsidiaries have value 1.