

Evaporation Rates in Antique Inkwells

By David Armstrong

Experiment run from February 18-March 18, 2011.

Accuracy $\pm 0.1\text{g}$

Empty Mass (g)	Inkwell ID	WEEK ONE % of total							WEEK TWO % of total						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
110.7	A	100	97	95	90	92	85	82	82	77	75	70	70	65	65
115.9	B	100	93	96	89	91	87	87	87	80	80	78	73	71	73
158.8	C	100	90	86	70	70	60	52	48	40	30	24	18	10	6
292.4	D	100	99	100	99	99	98	98	98	98	97	97	97	96	96
87.7	E	100	98	99	99	100	99	98	98	98	98	97	97	97	97
218.6	F	100	100	100	100	100	100	100	100	100	100	100	99	99	99
12.7	G	100	98	98	92	91	89	87	85	83	82	80	78	76	75
82.6	H	100	99	100	100	100	100	100	100	100	100	100	100	100	100
% Humidity		25	25	25	22	25	24	27	30	28	30	31	30	26	27
Ambient Temp (°C)			20	24	20	24	24	24	25	24	24	24	24	20	20

A. glass well with a simple gravity-closing hinged lid;

B. glass well with a silver snap-close hinged lid;

C. metal well with glass insert and a hinged outer cover (thus with space between the insert and the cover);

D. wooden well with glass insert and an unhinged cloth-lined wooden lid;

E. glass writing-box bottle, with threaded brass lid;

F. pottery ink bottle, with a new, replacement, cork;

G. (control) plastic graduated cylinder, open;

H. (control) modern glass ink bottle with plastic lid and synthetic lid liner (J. Herbin)

WEEK THREE % of total

WEEK FOUR % of total

15	16	17	18	19	20	21	22	23	24	25	26	27	28
63	60	55	55	53	48	50							
71	67	62	62	60	58	58							
2	0	0	0	0	0	0							
96	94	95	94	94	93	93							
97	96	97	96	96	96	96							
100	99	99	99	99	99	99							
73	72	70	69	67	66	65							
100	100	100	100	100	99	100							
28	33	31	29	27	30	35							
20	24	21	24	20	23	25							

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