U. S. DEPARTMENT OF COMMERCE
WASHINGTON

National Bureau of Standards

Certificate of Analyses

Standard Sample 171

Magnesium-base Alloy

ANALYST	ALUMINUM	ZINC	MANGANESE	SILICON	COPPER	LEAD	IRON	NICKEL	
1	[a]2.97	[b]1.05	[c]0.45 [d]0.46	[e]0.011$_4$	[f]0.011$_7$ [g].012$_1$	[h]0.0038	[i]0.0018	[j]0.0007	
2	[a]2.96 [k]2.98	[l]1.05	[e].45	[e].011$_3$	[g].010$_9$ [m].011$_5$	[h].0031	[i].0017	[j].0008	
3	[a]2.97	[l]1.04	[c].44	[n].012	[o].010	[h].003	[p].002	[j].0014	
4	[q]3.00	[b]1.07	.45	[e].010$_6$	[f].012	[r].0028			
5	[a]2.98	[l]1.04	[c].45	[e].012	[g].011$_4$	[h].0033	[s].0015	[j].0008	
6	[a]2.98 [k]2.99	[l]1.06	[t].45 [e].46	[e].011	[g].011 [f].011	[h].0031 [u].0034	[s].0018	[j].001	
7	[v]3.00	[w]1.03	[t].45	[x].013	[o].011	[y].004	[p].0017 [s].002	[j].001	
8	[a]2.96	[a1]1.04	[c].46	[e].013	[g].011	[h].0031	[i].0018	[j].0008	
Average	2.98	1.05	0.45	0.011$_8$	0.011$_2$	0.0033	0.0018	0.0009	

[a] Benzoate-8-hydroxyquinoline method. See ASTM method E35—49, Methods for Chemical Analysis of Metals, p. 341 (1950). American Society for Testing Materials, Philadelphia, Pa.
[b] ZnS-ZnO method.
[c] KIO_4-photometric method. See ASTM method E35—50T.
[d] Persulfate-arsenite method using potentiometric end point.
[e] Molybdisilicic acid-photometric method. See ASTM method E35—50T.
[f] Electrolytic deposition.
[g] HBr-photometric method. See ASTM method E35—50T.
[h] Dithizone method. See ASTM method E35—50T.
[i] Bipyridyl-photometric method. See ASTM method E35—50T.
[j] Dimethylglyoxime-photometric method. See ASTM method E35—50T.
[k] Alizarin red S-photometric method.
[l] Potassium ferrocyanide method. See ASTM method E35—49.
[m] Copper separated with H_2S and determined by the iodide-thiosulfate method.
[n] Molybdenum blue-photometric method. See Anal. Chem. 20, 630 (1948).
[o] Diethyldithiocarbamate-photometric method.
[p] Thiocyanate-photometric method.
[q] Double ammonium hydroxide precipitation with intervening oxine separation.
[r] Internal electrolytic method.
[s] Orthophenanthroline-photometric method.
[t] Persulfate-arsenite method.
[u] Lead deposited electrolytically as PbO_2.
[v] Mercury cathode—aluminum oxide method.
[w] $ZnHg(CNS)_4$ method.
[x] Perchloric acid method.
[y] Lead separated electrolytically and determined by iodometric titration.
[z] Aluminon-photometric method.
[a1] Potassium ferrocyanide method using potentiometric end point.

Analyst 7 reported 0.002 percent calcium by the flame photometer method.

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The metal for the preparation of this standard was furnished by the Dow Chemical Co.

WASHINGTON 25, D. C., November 27, 1951.

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U. S. GOVERNMENT PRINTING OFFICE 978472