

COMPOSITION OF LEAD ARSENATES.

Sample No.	Manufacturer	Water %	Lead Oxide PbO %	Arsenic Oxide As ₂ O ₃ %	Figured to dry basis		Lead arsenate as:	
					As ₂ O ₃ %	PbO %	PbH %	Pb ₃ %
347	Graselli Co., Cleveland.	40.49	40.335	16.744	28.14	67.78	44.00	53.00
348	Chemical Laboratories, Toronto.....	42.81	41.285	13.886	24.28	72.19	100.00
349	Sherwin-Williams, Cleveland.....	50.48	35.020	13.678	27.62	70.72	29.66	69.84
306	Niagara Brand Spray Co., Burlington.....	24.23	54.492	18.544	24.47	71.92	98.00
372	Hemingway London Purple Co.....	48.32	32.904	16.634	32.18	63.67	92.50	6.50
373	Swifts.....	45.14	34.803	17.774	13.40	63.44	95.60	2.00
436	May & Baker, London, Eng.....	47.24	30.564	16.429	31.14	57.93	100.00
555	E. Merck, Darmstadt, Germany.....	1.01	73.425	23.632	23.87	74.17	100.00
346	Graselli Co., Cleveland.	0.528	68.14	27.147	27.29	68.50	33.64	62.58

The 6th and 7th columns showing the composition when figured to dry basis illustrate how the per cent. of lead (PbO) and arsenic (As₂O₃) vary as the form of the lead arsenate varies. The higher the quantity of neutral arsenate the lower is the per cent. of arsenic and the higher the per cent of lead, and *vice versa*.

Lead arsenates should be of such a quality that when mixed with water they will give only inappreciable quantities of soluble arsenic, not more than 0.75 per cent. Samples which, when boiled with ammonia water, will give in the filtrate a precipitate with lead acetate and acetic acid, are as a rule injurious to foliage. The addition of a solution of lead acetate or nitrate to such arsenates till there is an excess of lead, as shown by potassium iodide paper (see under home-made lead arsenate), would be beneficial.

HOME-MADE LEAD ARSENATE.

If one cares to he can make his own lead arsenate at home. The only drawback to this is the assurity of obtaining materials of suitable quality. Bulletin 131, Bureau of Chemistry, U.S. Dept. of Agriculture, gives the following directions:

Formula A.	Ozs.
Sodium Arsenate (65%)	8
Lead acetate (sugar of lead)	22