

TABLE I.—SOLUBILITIES OF NH_4I IN AQ —OBSERVATIONS.

Temp.	Solty.	Temp.	Solty.	Temp.	Solty.
—19°	136.7	32.2°	183.4	93.8°	243.9
—6	148.6	47.2	197.1	110.5	262.4
+6.4	160.2	55.5	204.3	135.0	292.1
10.1	163.2	61.3	210.3	136.0	294.5
25.0	176.7	70.8	219.6
29.6	181.2	80.8	229.3

TABLE II.—SOLUBILITIES OF NH_4I IN AQ AT ROUNDED TEMPS.

Temp.	Solty.	Temp.	Solty.	Temp.	Solty.
—20°	136.0	25°	176.8	80°	228.8
—10	145.0	30	181.4	100	250.3
0	154.2	40	190.5	120	273.6
10	163.2	50	199.6	140	299.2
15	167.8	60	208.9
20	172.3	70	218.7

Summary.—The solubilities of ammonium iodide have been measured between —19° and 136°.

The points lie on a single smooth curve, thus confirming Wallace's conclusion regarding the non-existence of a transition point within the same range of temperatures.

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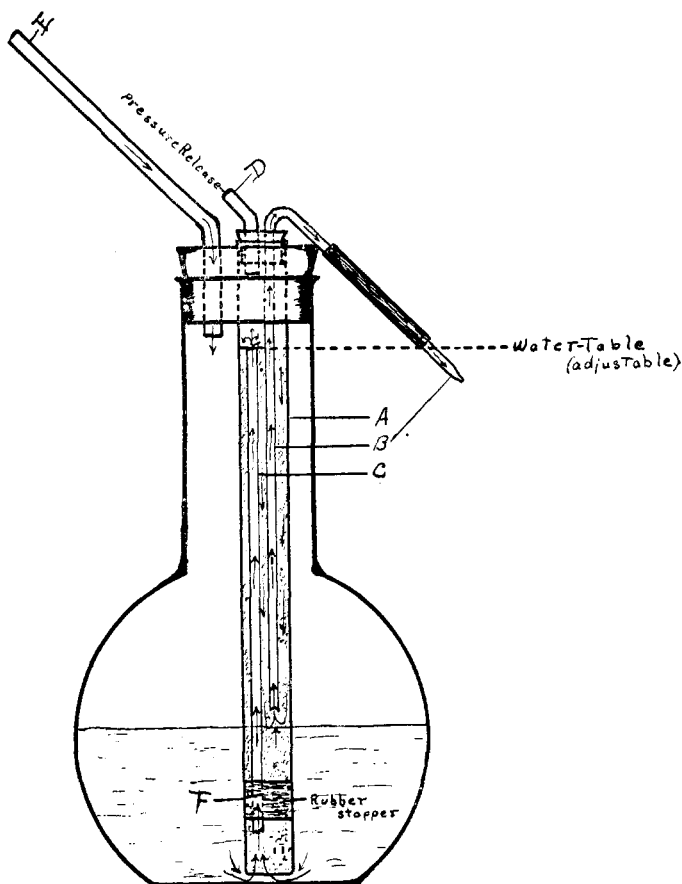
NOTE.

A Non-Spattering Wash Bottle.—To avoid spattering at the tip of the nozzle of the ordinary wash bottle the principle of raising the water-table of the wash bottle slightly above the level of the tip of the nozzle has been adopted so that "back action" will not take place and the nozzle tube will remain permanently full of water.

A careful study of the diagram will make the principle clear. While in use the thumb is held over the pressure release D, the water is forced up through the tube C till the water-table indicated, has been reached, the water level being maintained by the stopper F. The nozzle works the same as though the wash bottle were full up to the raised water level. Before releasing the pressure from the mouth piece the thumb is taken off the tube D so that the height of the water-table in A may be insured and to prevent "back action" through B.

In construction the following details are important:

1. Make D 5 mm. or as large as possible to afford a quick release of pressure, having it project only to the bottom of the small cork in A.
2. The size (4 mm.) and length of B are not important just so the bottom projects an inch or so below the water-table.
3. The stopper F should be near the bottom of A for best results.



4. The tube A (12 mm.) projects up through the stopper and to the bottom of the bottle.

5. The intake C should be 4 mm. or as small as possible and still give sufficient flow. Its height determines the height of the water-table.

Note.—All calibrations are outside measurements. F. C. CLAPP.

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[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE UNIVERSITY OF CALIFORNIA.]
**RELATIONS BETWEEN THE CONSTANTS OF DIBASIC ACIDS
AND OF AMPHOTERIC ELECTROLYTES.**

By ELLIOT QUINCY ADAMS.

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This paper comprises some remarks on the ionization of polybasic acids, of their acid esters, of polyacid bases, and of amphoteric electrolytes.