

Notes provided by Professor Chris Ambidge

chris.ambidge@utoronto.ca

416 978 3106 / Wallberg Building 200 College Street, room 207

Barium Perchlorate (dessichlora) BDH

A 10cm tall brown glass bottle of $\text{Ba}(\text{ClO}_4)_2$, a drying or dessicating agent, sold under the name "Dessichlora". The cork stopper is original, and on the left shoulder of the bottle in the image the remnants of the paper-strip seal can be seen. Sold by British Drug Houses from their Graham St London address – which puts this bottle during or before WW II.

British Drug Houses Spot Test Outfit [images 3317, 3319]

[currently on (permanent?) loan to the Institute for the History and Philosophy of Science,, University of Toronto for a 2014 exhibition]

The BDH Spot Test Outfit is a useful collection of reagents and equipment for testing the presence of many different metals and radicals in compounds. The legend on the inside lid of the box specifies which of the numbered reagents should be used to test for which elements, while the accompanying handbook (though a later edition than the kit) provides step-by-step details for going about the spot test. The large centre well in the box would originally have contained equipment (small beakers, test-tubes, and spot test plates (white glazed porcelain slab, with shallow circular dimples , in which you could mix a couple of drops of this and of that, and see any colours that did (or didn't) appear. These items have since been lost.

Although such an outfit may have been used in an academic laboratory here at the University of Toronto (probably in the Department of Chemical Engineering and Applied Chemistry, where it was found), the sturdy and compact wooden box design and small reagent sizes make it ideal for fieldwork where mobility would be important.

Filter Papers Munktells in birchbark containers [images 3305.3304, 3297]

These images show two containers of filter paper, one (blue label) 7cm diameter, the other (red label) 11cm diameter. The containers are made of birch-bark, from Munktell's in Sweden. The 11cm container has never been opened, the 7cm container has been opened and has two circular boxes of paper remaining. The papers themselves seem identical to ones available today. The labels on the outside are identical (other than colour and size designation). The text on the label is:

"J H Munktell's Unrivalled Genuine Swedish Filtering Paper / Recommended by the Most Clever Chemists / Berzelius considered it the best in the world // No 00H / made in Sweden / 7cm / made in Sweden // Each packet containing 100 filters / the ashes of each filter = 0,00008gr / treated with hydrochloric and hydrofluoric acid."

I think the picture and signature in the centre of each label is JJ Berzelius - a Swedish chemist active in the early and mid 1800s, who discovered/ identified silicon, selenium, cerium and thorium; and developed modern chemical notation. One of the most clever chemists in his own right.

Potassium Persulfate Merck Germany [3315]

A bottle of “Kalium Persulfuricum”, potassium peroxydisulphate $K_2S_2O_8$. A 1-kg bottle, in the original bottle from E Merck, Darmstadt. The bottle is pre- WW II. The original stopper has been lost, and a later black rubber bung in use now.

Various pieces of apparatus [image 3309]

Assorted old bits of apparatus still in Chemical Engineering. Second from the left is a flash-point apparatus, on the right is a portable refractometer.