^{16}O

In the 1918 paper "A New Method of Positive Ray Analysis" Dempster measured the mass of ^{16}O at the Ryerson Physical Laboratory of the University of Chicago (1918De01). Aluminum phosphate on a platinum foil was placed at the entrance of the newly developed mass spectrometer and was bombarded with electrons: "Although the aluminium phosphate was chemically pure, the rays obtained under the bombardment of 128 volt electrons were very complex; the following ions were observed besides a couple of unresolved groups; H_1, H_2, Li (weak), O_1 (strong), Na (strong),..." Dempster assumed that oxygen was perfectly homogeneous.

This assignment was changed (2016Th03) from the initial compilation (2012Th01) where the discovery of ^{16}O was credited to a later paper by F. W. Aston (1919As01) published in 1919.

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