

The Search for Organic Compounds in Various
Apollo 12 Lunar Samples by Mass Spectrometry

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ABSTRACT

Five different Apollo 12 samples were obtained for analysis, providing an opportunity to investigate any differentiation in the distribution (or presence) of organic compounds in relation to the original location of the samples from the Ocean of Storms. Analysis of the core tube samples indicated an apparent inverse relationship between the organic compound concentration and inorganic carbon (carbon monoxide) concentration with the distance of the sample from the surface of the moon. The organic material present in the returned lunar material is very low in concentration (estimated in parts per billion region). In an effort to resolve some inconsistencies in the Apollo 11 reports pyrolysis experiments at atmospheric pressure were performed for comparison to the above results obtained by vaporization under low pressure.