

Performance of Silica Gel in the role of Residual Air Drying

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Removal of carbon dioxide (CO₂) is a necessary step in air revitalization and is often accomplished with sorbent materials. Since moisture competes with CO₂ in sorbent materials, it is necessary to remove the water first. This is typically accomplished in two stages: “bulk” removal and “residual” drying. Silica gel is used as the bulk drying material in the Carbon Dioxide Removal Assembly (CDRA) in operation on ISS. There has been some speculation that silica gel may also be capable of serving as the residual drying material. This paper will describe test apparatus and procedures for determining the performance of silica gel in residual air drying.

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