

## Dry Ice Carried on board a Quest Diagnostics Beech Baron Model 58 Aircraft.

Per Quest's interview with the New Jersey Security Field Office Inspectors they stated "although Quest Diagnostics does not have any specific policy for the maximum amount of dry ice that can be loaded on one of their Beechcraft aircraft... approximately 14-21 packs will contain 5 pounds of dry ice max, concluding that one of these flights will never contain more than 105 pounds of dry ice".

The aircraft cabin volume is only 59 cubic feet.

DOT/FAA/AM-06/19 Office of Aerospace Medicine (Reference Material used for this)

Sublimation Rate of Dry Ice Packaged in commonly Used Quantities by the Air Cargo Industry states "That the complete sublimation of one pound of dry ice yields 8.8 cubic feet of CO<sup>2</sup> per hour.

The Beechcraft Baron Aircraft has a cabin volume of 59 cubic feet.

Assuming a 2% sublimation rate, 100 pounds of dry ice will create 17.6 cubic feet of CO<sup>2</sup> gas per hour. With no complete cabin air changes, this would result in an atmosphere of 29.8% CO<sup>2</sup>. This is 60 times the allowable limit. The percentage would only increase with the duration of the flight. A concentration of 12-15% will produce unconsciousness.