



FIRE PROTECTION LABS
DYNETM

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Dry Chemical Testing Explanation

Moisture Content

Dyne determines the moisture content (% by mass) of dry chemical samples by using Karl Fisher titration.

The 2018 edition of ISO 7202 *Fire protection – Fire extinguishing media – powder*, section 10, states that the moisture content of a dry chemical agent should be <0.25%.

A sample with high moisture content is subject to caking, which can impact the agent's ability to flow through equipment as designed. Moisture can also cause corrosion and therefore weakening of the extinguisher shell.

Chemical Composition

Dyne determines the chemical composition of dry chemical samples by using a combination of titration (carbonate) and ion chromatography (all other ions). The ions identified and quantified via these methods are interpreted* to determine the amount (% by mass) of each of the compounds listed on the report.

To determine whether the reported chemical composition is acceptable or not, please consult the product's technical datasheet or certificate of analysis. If these documents are not available or do not contain the information needed, please contact the manufacturer.

A sample that is found to have an unacceptable chemical composition, either the wrong type or the wrong concentration, may not perform as designed. Note that a mixture of ABC and BC agents can result in a chemical reaction that produces both carbon dioxide (increases pressure in storage container) and water (caking and corrosion can occur) as dangerous byproducts.

*Based on limiting ingredient concentration. Where overlap occurs, precedence is given to the compound with the higher possible concentration.