Q & A: What Qualifies Dyne to Test Your Dry Chemical Samples?

Q: What are the standard requirements?
A: **NFPA 10 for Portable Fire Extinguishers** says the following about when dry chemical from an extinguisher can be reused: “7.8.3.4.2 Prior to re-use, the dry chemical shall be thoroughly checked for the proper type, contamination, and condition.”

**NFPA 17 for Fixed Dry Chemical Systems**, Section 11.3.1, states dry chemical systems that are not pressurized shall be examined “semiannually and after any system activation” including “examination of the dry chemical.” Section 11.3.1.2 says dry chemical in stored pressure systems shall only require examination every 6 years.

**IMO 1432 for Fire Protection Systems**, Section 8 (two-year testing), states in 8.2.4 that a sample of dry chemical from fixed dry chemical powder systems must be tested for moisture content.

Q: Is Dyne a recognized testing laboratory?
A: **Dyne Fire Protection Labs** has been in the fire service laboratory testing business for over 18 years. During this time, Dyne has tested for a variety of business and currently tests for 34 of the top 100 fortune 500 companies.

Q: Is Dyne acceptable to the Authority Having Jurisdiction (AHJ)?
A: While NFPA does not approve any specific lab, they do say the following in the annex of NFPA 25:

> A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

For an AHJ to determine acceptability of our lab, Dyne must show NFPA compliance (or another relevant standard).

Q: How does Dyne meet NFPA’s requirements for dry chemicals?
A: Dyne determines the percentage of moisture in dry chemical samples using Karl Fisher coulometry. The 2018 edition of ISO 7202 lists the maximum allowable amount of moisture to be 0.25%.

Dyne determines the chemical composition of the dry chemical agent using ion chromatography. Dyne reports the concentration (%) of the following: ammonium, calcium, carbonate, phosphate, potassium, sodium, and sulfate. These results are interpreted to determine the amount of monoammonium phosphate, sodium bicarbonate, potassium bicarbonate, ammonium sulfate, and calcium carbonate possibly in the sample. A dry chemical agent cannot be a mixture of agents and, according to the 2018 edition of ISO 7202, the agent must be within a certain percent of its advertised chemical components.
Q: Who else trusts Dyne with their compliance testing?
A: U.S. military including Air Force bases and Coast Guard. Top petroleum, refining, and energy (Colonial Pipelines, Exxon Mobil, Marathon, Mobil, Phillips 66, Kinder Morgan, Tesoro), marine safety (Crowley Petroleum, Hiller Systems Inc, Drew Marine, Vane Brothers), shipping (Chevron Shipping Company), chemical (DuPont, Nova Chemicals, BP Chemical, Dow Chemicals), and fire safety companies across the globe.

Q: Does Dyne have any listing or labeling practices as an organization concerned with product evaluations?
A: As an ISO 9001 accredited company, we are committed to high quality and laboratory standards. This includes the use of NIST traceable calibrated lab equipment and technicians with strong chemistry and/or engineering backgrounds. Dyne Fire Protection Labs is proud to have our experts actively participate in the codes & standards processes such as NFPA 11, NFPA 16, NFPA 25, UL 162 Industry Advisory Board.

Q: Is Dyne qualified?
A: NFPA defines qualified as the following:

3.3.34 Qualified. A competent and capable person who has met the requirements and training for a given field acceptable to the AHJ. (96, 2014)

Q: What other reasons make Dyne a competent lab I can trust?
A: • Dyne has been in the fire service laboratory testing business since 1999.
• Dyne is an ISO-9001-certified company – 2004 to today.
• Dyne employees actively participate in the codes and standards processes such NFPA 11, NFPA 16, NFPA 25, UL 199 Industry Advisory Board.
• Dyne conducts detailed, documented and continuous training of all its employees.
• Dyne processes insure calibrated and maintained equipment is used at all times.
• Dyne has detailed documented work instructions for testing performed.
• Dyne is strictly a testing company and therefore is independent and unbiased.
• Dyne participates with both foam and sprinkler manufacturers in round robin testing where samples are tested by multiple labs to ensure the results are equivalent.

Q: What do Dyne’s current customers like best?
A: • Guaranteed turnaround time: 5-business days
  • Free test kits and shipping available within the continental U.S.
  • Easy ordering: Kits can be requested online, are shipped the same day or next business day
  • Access to reports online and outstanding customer service
  • Reminders sent out to keep your testing on track

www.dyneusa.com