

# Frequently Asked Questions on How to Become a NFPA Certificated Marine Chemist

*Responses to FAQs are prepared by NFPA technical staff to assist candidates for registration as a Marine Chemist Trainee and applicants for initial certification as a NFPA Certificated Marine Chemist. The responses do not necessarily represent the official position of the NFPA or its Technical Committees and the Marine Chemist Qualification Board. In addition, the responses are neither intended, nor should be relied upon, to provide professional consultation or services.*

## **What is a NFPA Certificated Marine Chemist?**

A Certificated Marine Chemist is an individual who is a holder of a valid Certificate issued by the National Fire Protection Association in accordance with the, *Rules for the Certification and Recertification of Marine Chemists*, establishing the holder as a person qualified to determine whether construction, alteration, repair, lay-up, or shipbreaking of vessels, which may involve hazards covered by the *Standard for the Control of Gas Hazards on Vessels*, NFPA 306, can be undertaken with safety.

The United States Coast Guard and the Occupational Safety and Health Administration (OSHA) require that a Certificate issued by a Marine Chemist be obtained before hot work or fire producing operations can be carried out in certain spaces aboard a marine vessel. In complying with both the U.S. Coast Guard and OSHA regulations, the Marine Chemist applies the requirements contained in NFPA 306. This standard describes the conditions that must exist aboard a marine vessel. A survey by the Marine Chemist ensures that these conditions are satisfied.

In addition, a Marine Chemist, by virtue of his or her training and continuous professional upgrading through the Certification program administered by the Marine Chemist Qualification Board, is able to perform similar evaluations in workplaces other than marine vessels and shipyards where an unsafe environment exists for workers or hot work is contemplated on a system that might contain residues of a flammable or combustible product.

## **Who can be a NFPA Certificated Marine Chemist?**

Applicants for initial certification as a Marine Chemist must be citizens of the United States. However under special or unusual circumstances, and after consultation with the President of the NFPA, the Marine Chemist Qualification Board may consider foreign nationals for certification.

## **Who certifies Marine Chemists?**

Marine Chemists are initially certificated by the Marine Chemist Qualification Board (MCQB). The MCQB also re-certificates Marine Chemists every five years in accordance with the, *Rules for the Certification and Recertification of Marine Chemists*.

## **Is a NFPA Certificated Marine Chemist an employee of the NFPA?**

No. Certificated Marine Chemists are not employed by the NFPA. A Certificated Marine Chemist can be employed by a shipyard, work with several other Marine Chemists under a single company name or provide services to the maritime and shipbuilding and repair industry as a sole proprietor. Marine Chemists are not compensated by the NFPA.

The NFPA does not compensate or reimburse Trainees for any fees or expenses incurred while training to become a Certificated Marine Chemist.

**Are there physical requirements that must be met to be a NFPA Certificated Marine Chemist?**

The job of a NFPA Certificated Marine Chemist is a physically demanding activity. The NFPA Certificated Marine Chemist is required to enter and visually inspect confined spaces on marine vessels and in the shipyard. Candidates and applicants need to be physically able to perform the duties of a NFPA Certificated Marine Chemist. A requirement for initial certification and recertification (every five years) is verification from a licensed physician or physician assistant that the applicant is physically fit and free of debilitating illness and injury that could inhibit the individual from effectively performing the duties of a Marine Chemist. Among the criteria that the licensed physician or physician assistant will assess are (but not limited to):

- Work in extreme temperature (heat and cold) for extended periods exceeding one hour.
- Safely move about on slippery, sloping, uneven and unstable surfaces.
- Safely enter, move about within and egress cargo tanks, cargo holds and other confined spaces that may involve maneuvering over 6 ft (1.8 m) ship framing; climbing up and down 30 ft (9.1 m) vertical ladders and 80ft (24.3 m) stairways.
- Safely move between spaces and into/out of compartments on marine vessels that can involve stepping over a door threshold or coaming of 24 inches (61 cm) in height; moving through restricted openings or man holes of 24 inches by 24 inches (61 cm X 61 cm), crouching (lowering height by bending knees); kneeling (placing knees on ground); and stooping (lowering height by bending at the waist).
- Manipulate mechanical devices using manual and digital dexterity, and strength to open and close watertight doors that may weigh up to 55 pounds (25 kg).
- Perform visual inspections and surveys that can involve the use of hand tools such as spanners, valve wrenches, hammers, screwdrivers, pliers.

**What academic qualifications does an applicant need to complete to be eligible for initial certification as a Marine Chemist?**

Each Applicant shall have at least a Bachelor's Degree from a college or university accredited by an accrediting agency recognized by the Secretary of Education of the United States or accrediting agency of another country as acceptable to the Board. Work shall include the following college level courses intended for science majors with a final minimum passing grade of 2.0 out of a 4.0 grading scale for each required course:

- Two semesters or three quarters of general inorganic chemistry with labs.
- Two semesters or three quarters of organic chemistry with labs.
- One semester or two quarters of analytical chemistry with lab, including instrumental analysis.
- One course in industrial hygiene sampling and analysis.

In addition to the above academic requirements each applicant must successfully complete a self-study program related to safety and maritime issues pertinent to the Marine Chemist profession and submit a thesis to the Marine Chemist Qualification Board outlining the applicant's knowledge on a subject related to the science of marine chemistry.

The Board can consider other professional achievements as equivalent to any or all of the academic qualifications.

**What are the professional requirements necessary for someone to be certificated as a Marine Chemist?**

Each Applicant, while a Trainee, shall have completed at least six (6) months of supervised training with at least three (3) different Certificated Marine Chemists in all tests and inspections required prior to the issuance of a Marine Chemist's Certificate as required by the Standard, NFPA 306. This training shall include not less than three hundred (300) hours of supervised training aboard a variety of types of both ocean-going and inland vessels as covered by the Standard, NFPA 306.

In addition each applicant is required to show evidence of at least three (3) years of full-time employment. One year or more full-time employment shall be in the analysis of physical samples similar to those routinely analyzed by Marine Chemists. This employment is to be in a laboratory or other similar work environment acceptable to the Marine Chemist Qualification Board.

The remaining time, but not less than one year, must be in full time employment in marine construction or repair, or in another marine industrial environment acceptable to the Board.

The Board can consider other professional achievements as equivalent to any or all of the practical qualifications.

**How long does a Marine Chemist Trainee have to complete the requirements for initial certification as a Marine Chemist?**

Trainees must complete all requirements for initial certification, except for the personal interview with the Marine Chemist Qualification Board within six years of the Board's acceptance of the application for registration. Failure to meet the six year requirement shall cause the registration to be terminated. After termination for this reason, the Trainee may be reinstated at the discretion of the Board. At the time of reinstatement, the Board shall determine the previous training it will accept, if any, and specify the Trainee's remaining requirements for certification.

**Are there any fees or expenses associated with becoming a Marine Chemist Trainee and an applicant for initial certification as a Marine Chemist?**

There is a non-refundable fee of two hundred fifty dollars (\$250.00) that must be submitted with the registration application. Trainees can also incur expenses associated with required academic course work and required field training. These fees and related expenses are the responsibility of the trainee and are not refundable or reimbursable by the NFPA.

There is a non-refundable initial certification application processing fee of two hundred fifty dollars (\$250.00) that is required to be submitted with the initial certification application.

**How do I get more information about becoming a NFPA Certificated Marine Chemist?**

The Marine Chemist Directory includes the *Rules for Certification and Recertification of Marine Chemists*, which explains the training and certification requirements in detail. To obtain a copy of the Directory and application forms, contact NFPA's Marine Field Service at (617) 984-7418 or Email: [marine@nfpa.org](mailto:marine@nfpa.org).