

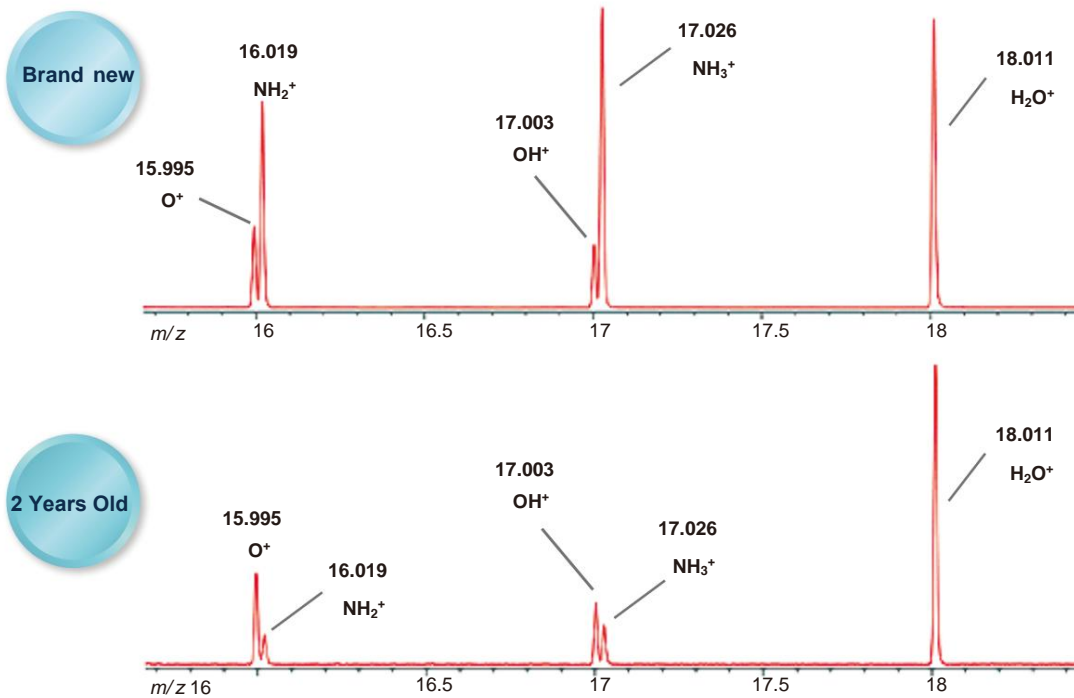
- Ammonia water is used as a treatment for insect bites, often used in the summer. After the mosquito season has passed, there are many cases where the leftover medicine remains in the medicine cabinet the following year, and the year after that.
- Using a multi-turn time-of-flight mass spectrometer (infiTOF), we investigated the ingredients of insect bite medicine that was new and that had been opened for two years.

[Analysis target] Insect sting medicine containing ammonia water (ammonia water 20.30 mL/100 mL), new (use-by date 2018.04), product 2 years after opening (use-by date 2016.05)

[Analysis method] •Direct introduction of headspace with capillary tub ionization method EI



infiTOF-DUO



- Fragment ions of ammonia (NH_3) and water (H_2O) (integer mass m/z 17: NH_3 and OH , m/z 16: NH_2 and O) have close accurate masses to each other and can be peaked with a general mass spectrometer. It is difficult to separate and identify. The infiTOF's multi-turn method provides mass resolution that allows complete separation of these fragment ion peaks, making it possible to identify components from accurate mass information.
- In this way, by using infiTOF, it is possible to sufficiently separate peaks even for components whose accurate masses are close to each other, and component identification and quantitative analysis using accurate masses is possible. Since sample introduction can be performed directly, it can be widely used for monitoring gas in real time.
- In addition, the active ingredient in insect bite medicine that has been opened for two years has decreased, so it is better to replace it with a new one.



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