

工业氨水测定专用防腐气相色谱仪

Ammonia, also known as Ammonia water, the main component of $\text{NH}_3 \cdot \text{H}_2\text{O}$, ammonia is an aqueous solution, colorless and transparent and pungent odor. Ammonia -77°C melting point, the boiling point of 36°C , density $0.91 \text{ g} / \text{cm}^3$. Ammonia easily soluble in water, ethanol. Volatile, with a part of the base of the common, ammonia from ammonia into the water obtained. Ammonia toxic, on the eyes, nose, skin irritation and corrosive, can cause suffocation, the air *** high allowable concentration of $30 \text{ mg} / \text{m}^3$. Mainly used as fertilizer.

Industrial ammonia is ammonia 25% to 28% of the aqueous solution, ammonia, only a small part of ammonia molecules react with water to form ammonium ions and hydroxide ions, namely ammonium monohydrate, is only present in the ammonia in the weak base. Ammonia freezing point and concentration of ammonia, the commonly used (wt) 20% concentration of freezing point of about -35°C . Neutralization reaction with acid produces heat. Risk of combustion explosion. The specific heat capacity was $4.3 \times 10^3 \text{ J} / \text{kg} \cdot ^\circ \text{C}$ (10% ammonia).

The determination of industrial ammonia using the traditional chemical acid-base titration, this method is cumbersome, long analysis time, the amount of sample, and the determination of human factors, such as the absorption of gas flow rate, the level of deviation and standard deviation Solution titration, the end of the judgment will result in a large error in the measurement results, and the absorption tube sometimes lax phenomenon of inverted suction, resulting in failure or inaccurate analysis. During the analysis, a large amount of ammonia volatilized is harmful to the health and pollution of the environment.

Some people use ordinary gas chromatographic determination of industrial ammonia, but the ammonia is corrosive, equipment and column life is short, and the peak shape of the tail, quantitative error, no use value, can not promote the use of.

Tengzhou Xiangying Analytical Technology Co., Ltd. is advancing with the times and guided by scientific development. Under the leadership of General Manager Wang Xiaoying, we rely on Xiangying Chromatographic Engineering Research Institute and Analysis and Testing Center, and make unremitting efforts. Out of ammonia for industrial analysis of anti-corrosion gas chromatograph, in a leading domestic level. This instrument to solve the two key core issues: 1. Instrument using anti-corrosion material, especially the thermal conductivity detector

TCD, the use of anti-corrosion silk, enough to resist corrosion of ammonia, life greatly extended. (This technology is the nature of our patented technology, has a very high value); 2. Developed a special anti-corrosion ammonia column, the column-shaped symmetry, column efficiency, long life, is also second to none in the country.

氨水又称阿摩尼亚水，主要成分为 $\text{NH}_3 \cdot \text{H}_2\text{O}$ ，是氨气的水溶液，无色透明且具有刺激性气味。氨气熔点 -77°C ，沸点 36°C ，密度 $0.91\text{g}/\text{cm}^3$ 。氨气易溶于水、乙醇。易挥发，具有部分碱的通性，氨水由氨气通入水中制得。氨气有毒，对眼、鼻、皮肤有刺激性和腐蚀性，能使人窒息，空气中***高容许浓度 $30\text{mg}/\text{m}^3$ 。主要用作化肥。

工业氨水是含氨 25%~28% 的水溶液，氨水中仅有一小部分氨分子与水反应形成铵离子和氢氧根离子，即一水合铵，是仅存在于氨水中的弱碱。氨水凝固点与氨水浓度有关，常用的 (wt) 20% 浓度凝固点约为 -35°C 。与酸中和反应产生热。有燃烧爆炸危险。比热容为 $4.3 \times 10^3 \text{ J}/\text{kg} \cdot ^\circ\text{C}$ (10% 的氨水)。

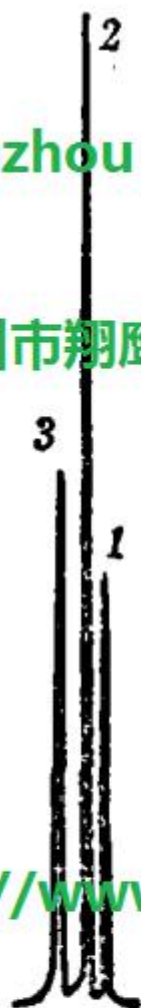
工业氨水的测定采用传统化学 **酸碱滴定法**，此方法操作繁琐，分析时间长，样品用量多，而且测定结果受人为因素影响较大，如吸收时气体流速的大小，液位读数的偏差及标准溶液滴定、终点判断等都会对测定结果造成较大的误差，而且吸收管有时密封不严出现倒吸现象，导致分析失败或结果不准确。分析过程中挥发出的大量氨气危害分析人员身体健康，污染环境。

也有人采用普通气相色谱仪测定工业氨水，但因氨水有腐蚀性，仪器和色谱柱使用寿命短，且色谱峰形拖尾，定量误差大，无使用价值，无法推广使用。

滕州市翔鹰分析技术有限公司与时俱进，以科学发展为指导，在王晓莹总经理的带领下，依托翔鹰色谱工程研究所和分析与测试中心 2 个科研单位，经过不懈努力，成功开发出工业氨水分析专用防腐气相色谱仪，在国内处于领先水平。此款仪器解决了 2 个关键核心问题：1. 仪器采用防腐材质，尤其是热导检测器 TCD，采用防腐丝体，足以抵抗氨水腐蚀，寿命大大延长。（此项技术，乃我公司专利性质技术，具有极高使用价值）；2. 研发出防腐氨水专用色谱柱，此柱峰形对称，柱效高，使用寿命长，在国内也是首屈一指。

Tengzhou Xiangying Analytical Technology Co., L

滕州市翔鹰分析技术有限公司



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<http://www.xiangying17.net/>

NH_3 - H_2O 的分离

1. 空气(20"); 2. H_2O
(42"); 3. NH_3 (1'16").

www.xiangying17.net

XiangyingGC7990plus features:

1 excellent performance, competitive price, to meet the customers' choice

2 multi industry adaptability

3 outstanding performance in all kinds of harsh environment

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A variety of sampling ports can be equipped with: packed column inlet,
shunt / non shunt capillary inlet,

Hydrogen flame ionization detector (FID)

Maximum use temperature: 400

The minimum detection limit: $-12 = 2.5 \times 10^{-12}$ g/s (n-C16)

Linear range: 10⁷ (+ 10%)

XiangyingGC7990plus 特点:

1. 卓越的性能，具有竞争力的价格，满足广大客户的选择
2. 多行业适应性
3. 在各种苛刻环境下均表现出色

进样口

多种进样口可配：填充柱进样口、分流/不分流毛细管进样口、

氢火焰离子化检测器 (FID)

***高使用温度：400℃

***小检出限： $\leq 2.5 \times 10^{-12}$ g/s (n-C16)

线性范围：10⁷ (±10%)