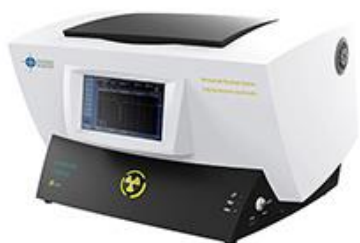


# 汽油、柴油、石脑油及芳烃中超低氯含量分析

—— 具备超低检出限的单波长色散 X 射线荧光光谱仪

Analysis of ultra-low chlorine content in gasoline, diesel, naphtha and Aromatics

—— Monochromatic wavelength dispersive X-ray fluorescence spectrometer with ultra-low detection limit



DUBHE-1710

## summar

In the process of petroleum refining and chemical production, chlorine has a significant impact on catalyst consumption and product quality. Therefore, the chlorine content of raw materials, semi-finished products and finished products should be analyzed to provide a scientific basis for quality control. However, ASTM D7536-2016 Standard Test Method for the determination of chlorine in aromatic compounds (Monochromatic wavelength dispersive X-ray fluorescence spectrometry) is a common method for the detection of chlorine content in

## characte

Features of DUBHE-1710 Monochromatic wavelength dispersive X-ray fluorescence spectrometer:

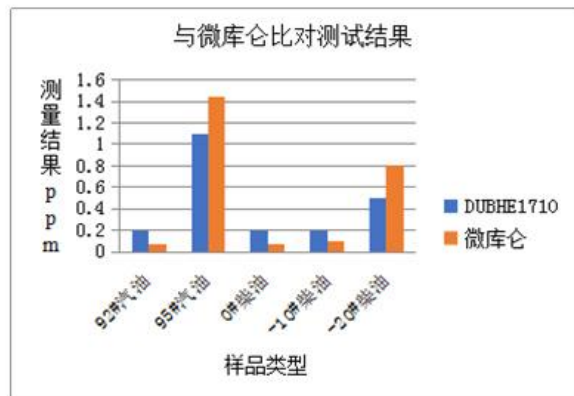
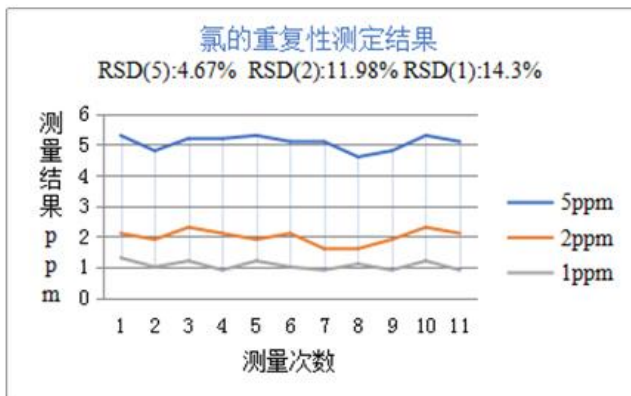
- Detection limit reaches 0.2ppm, good repeatability
- Simple operation and fast detection
- Low use cost

## Experimental part

- (1) Working curve of light oil with s content standard reagent of China Academy of petroleum and Chemical Sciences
- (2) The RSD value of the standard sample containing chlorine was calculated;
- (3) Gasoline, diesel and other oil products were tested and compared with the test results of Coulomb.

## Results and discussio

- (1) The linear correlation coefficient  $r$  of 0-50 ppm curve can reach 0.9999;
- (2) The repeatability result and RSD value of chlorine standard sample are shown in the figure below;
- (3) The test results of oil samples are consistent with those of microcoulometry.



## Conclusion

- (1) The Monochromatic wavelength dispersive X-ray fluorescence spectrometer with ultra-low detection limit has the advantages of good repeatability and simple operation in ultra-low chlorine detection;
- (2) The test results of gasoline, diesel oil, naphtha and aromatics are consistent with those of Coulomb test, and have high reliability.

## Reference

[1] ASTM D7536-2016 用单色波长分散 X 线荧光光谱测定芳族化合物中氯的标准试验方法。