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**NONFERROUS METALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

YS/T 581.18-2012

**Chemical analysis methods and physical properties of Aluminum
Fluoride. Part 18: X-ray fluorescence spectrometric method for the
determination of elements content using pressed powder tablets**

氟化铝化学分析方法和 物理性能测定方法 第18部分：X射线荧光光谱分析（压片
）法测定元素含量

(English Translation)

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Foreword

YS/T 581 "aluminum fluoride chemical analysis methods and determination of physical performance" is divided into 18 parts.

--- Part 1. Determination of the content of water in wet weight method;

--- Part 2. Determination of burning reductions;

--- Part 3. Determination of fluorine content;

--- Part 4. Determination of aluminum content - EDTA volumetric method;

--- Part 5. Determination by flame atomic absorption spectrometry sodium content;

--- Part 6. molybdenum blue spectrophotometric determination of silicon dioxide content;

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--- Part 8. Determination of sulfate content barium sulphate gravimetric method;

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--- Part 11. sample preparation and storage;

--- Part 12. Determination of particle size distribution by sieving;

--- Part 13. Determination of angle of repose;

--- Part 14. Determination of bulk density;

--- Part 15. Determination of free alumina content;

--- Part 16. Determination of Elements in X-ray fluorescence spectrometry;

--- Part 17. Determination of flow;

--- Part 18. Determination of Elements in X-ray fluorescence spectroscopy (tablet) method.

This section YS/T 581 Part 18.

This section drafted in accordance with GB/T 1.1-2009 given rules.

The non-ferrous metal part by the National Standardization Technical Committee (SAC/TC243) centralized.

This section is drafted. Fluoride Chemicals Co., Ltd., Henan Branch of Aluminum Corporation of China, Xinjiang Zhonghe have Limited.

1 Scope

YS/T 581 This part provides X-ray fluorescence spectroscopy (tablet) Determination of aluminum fluoride, fluorine, aluminum, sodium, silicon, iron, sulfur, phosphorus Methods (respectively F, Al, Na, SiO₂, Fe₂O₃, SO₂-4, P₂O₅ represented) and other elements.

This section applies to the determination of fluorine, aluminum, sodium, silicon, iron, sulfur, phosphorus and other elements of aluminum fluoride. Determination of the range in Table 1.

Table 1

Component	measuring range/measuring range component%	%
F	57 ~ 66	0.010 ~ 0.130
Al	30 ~ 35	0.07 ~ 0.80
SO ₂ -4	0.07 ~ 0.80	0.042 ~ 0.120
Na	0.042 ~ 0.120	0.0019 ~ 0.1500
P ₂ O ₅	0.0019 ~ 0.1500	0.008 ~ 0.400
SiO ₂	0.008 ~ 0.400	-

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

YS/T 581.11-2006 aluminum fluoride preparation and storage of chemical analysis methods and determination of physical performance - Part 11 samples

3 PRINCIPLE OF THE METHOD

A certain proportion of the sample and dispersant mixing, milling, and then pressed into samples. Measured by X-ray fluorescence spectrometer. root According to the standard samples in the calibration curve to calculate the intensity of each element content of each element in the sample.

4 Reagents

4.1

acetone. AR.

4.2

ethanol. AR.

4.3

boric acid. AR.

5 Instruments

5.1

wavelength dispersive X-ray fluorescence spectrometer.

5.2

vibration mill and tungsten carbide disc. disc to be able to grind the sample 30g or so is appropriate.

5.3

tablet press and die. pressing thickness of at least 4mm, pressure of about 35t, mold inside diameter and X-ray fluorescence analyzer sample cup match.