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(PAJ)

Crude oil and petroleum products—Determination of sulfur content Part 3 : Quartz-tube combustion method (Air method)

ICS 75.080

Reference number : JIS K 2541-3 : 2003 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Petroleum Association of Japan (PAJ), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

JIS K 2541 consists of the following 7 parts with the general title *Crude oil and petroleum products—Determination of sulfur content.*

Part 1 : Wickbold combustion method
Part 2 : Oxidative microcoulometry
Part 3 : Quartz-tube combustion method (Air method)
Part 4 : Energy-dispersive X-ray fluorescence method
Part 5 : General bomb method
Part 6 : Ultraviolet fluorescence method
Part 7 : Wavelength-dispersive X-ray fluorescence method

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Contents

Crude oil and petroleum products— Determination of sulfur content Part 3 : Quartz-tube combustion method (Air method)

1 Scope This Japanese Industrial Standard specifies the method of quantitative determination of the sulfur content of not less than 0.01 mass % in crude oil, light oil and heavy oil by the quartz-tube combustion method (air method).

Remarks 1 This method can not be applied to the sample compounded with additives containing the following:

a) Metal to produce insoluble sulfate (barium, calcium, etc.)

b) Elements to produce acid by combustion (phosphorus, nitrogen, chlorine)

2 Although dangerous reagents, operation and test apparatus are sometimes used in this Standard, this Standard does not purport to address all the safety precautions. Therefore, the user of this Standard shall establish the precautionary measures for safety and health prior to the test.

Information : The group of standards including this Standard specify the test methods shown in Informative Table 1.

Informative Table 1 Classification of test method

Group of standard	Classification of test method	Kind of oil to be applied (example)	Range of measurement
K 2541-1	Wickbold combustion method	Automobile gasoline, kerosene, light oil	1 mass ppm to 10 000 mass ppm
K 2541-2	Oxidative microcoulometry	Automobile gasoline, kerosene, light oil	1 mass ppm to 1 000 mass ppm
K 2541-3	Quartz-tube combustion method (Air method)	Crude oil, light oil, heavy oil	0.01 mass % min.
	Annex (informative) Quartz-tube combustion method (Oxygen method)		
K 2541-4	Energy-dispersive X-ray fluorescence method	Crude oil, light oil, heavy oil	0.01 mass % to 5 mass %
K 2541-5	General bomb method	Crude oil, heavy oil, lubricating oil	0.1 mass % min.
	Annex (normative) Inductively coupled plasma atomic emission spectrochemical analysis	Lubricating oil	0.05 mass % min.
K 2541-6	Ultraviolet fluorescence method	Automobile gasoline, kerosene, light oil	3 mass ppm to 500 mass ppm
K 2541-7	Wavelength-dispersive X-ray fluorescence method	Automobile gasoline, kerosene, light oil	5 mass ppm to 500 mass ppm