

Gasoline Oxygenate Reference Standards for ASTM Method D4815

Product Specification

These oxygenate reference standards are designed for use with ASTM Method D4815, a method for the determination of oxygenated compounds in reformulated fuels. ASTM D4815 is a dual column pneumatic switch analysis in which both polar and nonpolar columns are used. The fuel sample is first injected onto a polar column which retains oxygenated and high boiling compounds while venting interfering low boiling hydrocarbons. Following a pneumatic switching of the sample onto the nonpolar column, the oxygenate and high boiling compounds are separated. Detection is by flame ionization.

Along with valve timing and peak identification mixes, two sets of quantitative calibration mixes are available, both with and without internal standards. The internal standard-free mixes are packaged in quantities of 9.5mL to allow for the addition of the internal standard at point of use. Formulations containing the internal standard are packaged in 1mL quantities. All calibration blends are provided with a chromatogram and data verifying the purity and identity of the raw material.

Ordering Information:

Description	Nominal Weight (%)						Cat. No.
	Ethanol	t-Butanol	MTBE	t-Pentanol	iC8:Xylene (65:35)	DME	
D4815 Quantitative Calibration Mixes (Without Internal Standard), 9.5mL in isoctane:xylene (65:35).							
Mix 1	3.00	0.10	20.00	1.25	75.65	—	47200
Mix 2	0.10	3.00	15.00	5.00	76.90	—	47201
Mix 3	6.00	6.00	10.00	2.50	75.50	—	47202
Mix 4	9.00	8.00	5.00	3.75	74.25	—	47203
Mix 5	12.00	12.00	0.10	0.10	75.80	—	47204
D4815 Quantitative Calibration Mixes (With Internal Standard), 1mL in isoctane:xylene (65:35).							
Mix 1	12.85	0.095	19.00	1.19	71.87	5.00	47205
Mix 2	0.095	2.85	14.25	4.75	73.06	5.00	47206
Mix 3	5.70	5.70	9.50	2.38	71.73	5.00	47207
Mix 4	8.55	7.60	4.75	3.56	70.54	5.00	47208
Mix 5	11.40	11.40	0.095	0.095	72.01	5.00	47209

Internal Standard

1,2-Dimethoxyethane (DME)

Neat

5mL

47214

D4815 Valve Timing Mix

Each of the following components at the indicated quantities.

	Nominal Wt. (%)
Methylcyclopentane	10
Diisopropyl ether	10
Ethyl tert-butyl ether	10
Methyl tert-butyl ether	10
n-Hexane	60

1mL

47212

D4815 Qualitative Peak ID Mix

Each of the following components at the indicated quantities.

	Nominal Wt. (%)
Methylcyclopentane	4.0
Methanol	7.3
Ethanol	7.3
Isopropanol	7.3
tert-Butanol	7.3
n-Propanol	7.3
Methyl tert-butyl ether	4.0
sec-Butanol	7.3
Diisopropyl ether	4.0
Isobutanol	7.3
Ethyl tert-butyl ether	4.0
tert-Pentanol	7.3
1,2-Dimethoxyethane (internal standard)	6.0
n-Butanol	7.3
Benzene	5.0
tert-Amyl methyl ether	7.3

1mL

47213

D4815 Quantitative Calibration Kit

Contains 1mL of each of the following products.

Quantitative Calibration Mix 1 w/IS, 1mL (47205)
Quantitative Calibration Mix 2 w/IS, 1mL (47206)
Quantitative Calibration Mix 3 w/IS, 1mL (47207)
Quantitative Calibration Mix 4 w/IS, 1mL (47208)
Quantitative Calibration Mix 5 w/IS, 1mL (47209)
Valve Timing Mix (47212)
Qualitative Peak ID Mix (47213)

47211

D4815 Calibration Curve Verification Kit

Contains each of the following products.

Quantitative Calibration Mix 1 w/o IS, 9.5mL (47200)
Quantitative Calibration Mix 2 w/o IS, 9.5mL (47201)
Quantitative Calibration Mix 3 w/o IS, 9.5mL (47202)
Quantitative Calibration Mix 4 w/o IS, 9.5mL (47203)
Quantitative Calibration Mix 5 w/o IS, 9.5mL (47204)
1,2-Dimethoxyethane (47214)

47210

Oxygenate-Free Low-Olefin Gasoline

1mL

47215

Oxygenate-Free High-Olefin Gasoline

1mL

47216

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