

**PROPOSED MODIFICATIONS TO THE PROPOSED REGULATION ORDER,  
MADE AVAILABLE FOR SUPPLEMENTAL PUBLIC COMMENT**

**AMENDMENTS TO THE CALIFORNIA REFORMULATED GASOLINE  
REGULATIONS INCLUDING REFINEMENTS TO THE PROHIBITIONS OF  
MTBE AND OTHER OXYGENATES**

**Note:** The preexisting regulation text is set forth below in normal type. The originally proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. The subsequent modifications proposed by staff are shown in double underline to indicate additions and ~~double strikeout~~ to indicate deletions. Only the text containing proposed modifications is shown. Subsection headings in italics are to be italicized when printed in Barclays California Code of Regulations; the changes shown to section headings make corrections to the current version of the regulations in Barclays.

Amend title 13, California Code of Regulations, sections 2261(b)(3), 2262.6, 2263(b) and 2273, and adoption of 2260(a)(26.5) and 2273.5, to read as follows.

\* \* \* \*

Amend section 2263(b), title 13, California Code of Regulations, to read as follows:

**Section 2263. Sampling Procedures and Test Methods**

- (a) ~~Sampling Procedures.~~ Sampling Procedures. In determining compliance with the standards set forth in this subarticle 2, an applicable sampling methodology set forth in 13 C.C.R. section 2296 shall be used.
- (b) ~~Test Methods.~~ Test Methods.
- (1) In determining compliance with the standards set forth in this subarticle 2, the test methods presented in Table 1 shall be used. All identified test methods are incorporated herein by reference.

**Table 1**

<i>Section</i>	<i>Gasoline Specification</i>	<i>Test Method</i> <sup>a</sup>
2262	Reid Vapor Pressure	ASTM D 323-58 <sup>b</sup> or 13 C.C.R. Section 2297
2262	Sulfur Content	ASTM D 2622-94 <sup>c, d</sup> or ASTM D 5453-93
2262	Benzene Content	ASTM D 5580-00 <sup>e</sup>
2262	Olefin Content	ASTM D 1319-95a <sup>f</sup> (Through December 31, 2001) ASTM D 6550-00 <sup>g, h, i</sup> (Starting January 1, 2002)
2262	Oxygen Content	ASTM D 4815-99
2262	T90 and T50	ASTM D 86-99aε1
2262	Aromatic Hydrocarbon Content	ASTM D 5580-00 <sup>j</sup>
2262.5(b)	Ethanol Content	ASTM D 4815-99
2262.6	MTBE Content	ASTM D 4815-99
<u>2262.6(c)</u>	<u>Oxygen from oxygenates identified in section 2262.6(c)(4)</u>	<u>ASTM D 4815-99</u>

a Do not report values below the limit of detection (LOD) specified in the test method. Where a test method does not specify a LOD, do not report values below the lower limit of the scope of the test method.

b Delete paragraph 4(b) concerning sampling.

c Make the following modifications to paragraph 9.1:

Low Level Sulfur Calibration Procedure

Reagents

Thiophene, at least 99% purity

2-Methylthiophene, at least 98% purity

Toluene, reagent grade

2,2,4 - Trimethylpentane, reagent grade

#### Preparation of Stock Standard

Weigh standard materials thiophene (~0.7290 gm) and 2-methylthiophene (~0.7031 gm) separately into a tared volumetric flask and record the individual mass to 0.1 mg. Add "mixed solvent" containing 25% toluene and 75% iso-octane (by volume) into the flask to a net weight of approximately 50 gm and record the weight. This "Stock Standard" contains approximately 10 mg/gm sulfur. The actual sulfur concentration can be calculated as follows:

$$\text{Sulfur from thiophene (gm)} = \text{Weight of thiophene} * 32.06 * \text{purity} / 84.14$$

$$\text{Sulfur from 2-methylthiophene (gm)} = \text{Weight of 2-methylthiophene} * 32.06 * \text{purity} / 98.17$$

$$\text{Sulfur concentration of Stock Standard (gm/gm)} = (\text{sulfur from thiophene} + \text{sulfur from 2-methylthiophene}) / \text{net weight of the stock standard}$$

Multiply the sulfur concentration by 1000 to convert the unit to mg/gm.

#### Preparation of Calibration Standards

Pipet 2.5 ml of the Stock Standard to 250 ml flask and dilute with the "mixed solvent" to the mark. The "Diluted Standard" contains approximately 100 mg/kg sulfur. Prepare 5, 10, 20, 30, 50, 75 ppm calibration standards by pipetting 5, 10, 20, 30, 50, 75 ml of the Diluted Standard into a 100 ml flask, respectively, and diluting with the "mixed solvent" to the mark. The actual concentration of the calibration standard should be determined from the stock standard. The standards with concentration ranging from 5 to 100 ppm and the "mixed solvent" are to be used for calibrating the instrument.

- d Replace ASTM D 2622-94 reproducibility values with the following:

<i>Sulfur Content, ppm</i>	<i>Reproducibility</i>
10 to 30	40.5% X Sulfur Content (ppm)
>30	19.2% X Sulfur Content (ppm)

- e The reproducibility of benzene is as follows:

$$\text{Reproducibility} = 0.1409 (X^{1.133}), \text{ where } X = \text{vol } \%$$

- f Add the following reproducibility statement for oxygenate-containing samples:

<i>Range</i>	<i>Reproducibility</i>
Olefins 0.3 – 33	0.819 (X) <sup>0.6</sup>

X = Volume %

- g Replace ASTM D6550-00 reproducibility equation with the following:

$$\text{Reproducibility} = 0.32 X^{0.5}$$

where X is between 0.3 and 25 mass % olefin

- h The conversion from mass % olefin to volume % olefin is defined as follows:

volume % olefin = 0.857 \* mass % olefin

- i Replace the last sentence in ASTM D6550-00 section 1.1 with the following:

The application range is from 0.3 to 25 mass % total olefins.

- j The reproducibility of total aromatic hydrocarbon is as follows:

Reproducibility = 1.4 volume %

- (c) ~~Equivalent Test Methods.~~ Equivalent Test Methods. Whenever this section provides for the use of a specified test method, another test method may be used following a determination by the executive officer that the other method produces results equivalent to the results with the specified method.

NOTE: Authority cited: sections 39600, 39601, 43013, 43013.1, 43018, and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975). Reference: sections 39000, 39001, 39002, 39003, 39010, 39500, 39515, 39516, 41511, 43000, 43013, 43013.1, 43016, 43018, and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

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Adopt section 2273.5, title 13, California Code of Regulations, to read as follows:

**Section 2273.5. Documentation Provided with Delivery of Gasoline to Retail Outlets.**

Any person delivering gasoline to a retail gasoline outlet shall provide to the outlet operator or responsible employee, at time of delivery of the fuel, an invoice, bill of lading, shipping paper, or other documentation which states whether the gasoline does or does not contain ethanol, and which may identify the volumetric amount of ethanol. If neither the outlet operator nor a responsible employee is at the outlet at the time of delivery, the documentation may be left at a reasonably secure location at the outlet.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018 and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal. Rptr. 249 (1975). Reference: Sections 39000, 39001, 39002, 39003, 39010, 39500, 39515, 39516, 41511, 43000, 43016, 43018 and 43101, Health and Safety Code; and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal. Rptr. 249 (1975).