

LATIN AMERICA AND THE CARIBBEAN SULPHUR LEVELS IN DIESEL FUEL

Country	Diesel Sulphur Level (ppm), max allowable	Petrol Sulphur Level (ppm)	Comments	Reference
Anguilla				
Antigua and Barbuda			Imports petroleum products and oil.	
Argentina	2500	500	<p>Multiple grades available on market depending on population density zone; Law 26.093 requires 5% biodiesel to be blended with diesel fuel starting January 1, 2010.</p> <p>Diesel: 500 ppm diesel available. 2012 target of 50 ppm city/1500 ppm nationwide diesel coincide with Euro IV standards for diesel passenger vehicles.</p> <p>Gasoline: 300 ppm gasoline available. and 50ppm cities /300 ppm nationwide gasoline planned for 2012</p> <p>9 refineries – no plans to invest in upgrades.</p>	Resolution 1283/2006, Secretary of Energy
Aruba			One refinery – Lago, heavy sour crude oil.	
Bahamas			Imports oil for domestic processing of petrol.	
Barbados	5000	1000	Imports fuel from Trinidad which refines Barbados' oil. Barbados National Oil Co. Ltd. produces crude oil. Mobil Oil Barbados Ltd. refines oil.	
Belize			Imports crude oil and petrol from US, Venezuela, Mexico and Cuba. Oil found and being exported. No refineries.	Govt. of Belize – March 2010

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Bermuda			Fuels are imported from US, Canada, Italy and UK	
Bolivia	5000	500	<p>Diesel: 2000 ppm diesel also available on market</p> <p>2 refineries; Both diesel fuel and petroleum gas are heavily subsidized by the government.</p>	ARPEL 2007; EIA
Brazil	2000	1000	<p>Diesel: Brazil's diesel has 1,800ppm in rural areas. In the metropolitan areas there are two types of Diesel 50 and 500 ppm. The 50 ppm or EURO IV is used only for Public Transport, Bus services. The general public uses 500 ppm diesel.- 500ppm planned for 2014 nationwide.</p> <p>USD 6 billion refinery upgrade planned to produce low-sulfur diesel 50ppm for all trucks and buses in the country's 14 largest cities by 2012 and to 10ppm by 2013 for urban areas.</p> <p>13 refineries (2 private, 11 state owned Petrobras).</p> <ul style="list-style-type: none"> The goal of 50ppm diesel in metropolitan Brazil was not achieved as planned for January 2009 due to technical problems at refineries and with the automotive industry. So CONAMA (National Council on the Environment) issued a new resolution, number 403, on November 11, 2008, which established that, at 1st January 2012, the maximum level of sulfur in diesel fuel sold in Brazil will be 10 ppm; <p>The ANP (National Agency of Petroleum, Natural Gas And Biofuels), the Brazilian regulatory agency for fuels, is trying to solve the technical problems, so they have issued a resolution - ANP Nr 42, from December 2009, which established:</p>	<p>CONAMA Resolution 315, of 2002</p> <p>Judicial Agreement Nov 2008</p> <p>Coalition for Clean Air, Brasil</p> <p>latimes.com/business/la-fi-biofuels4-2009nov04,0,2435171.story Chris Kraul</p> <p>SECRETARIA DE ESTADO DO</p>

		<p>1. Diesel 50 ppm is sold, from January, in some metropolitan areas of cities like (a) Belem at Para State; (b) Fortaleza at Ceara State and (c) Recife at Pernambuco State. Also used by some private bus fleets from Rio de Janeiro, Sao Paulo and Parana States. The diesel sulphur level for public transport buses will follow a schedule in major metropolitan areas of Rio and Sao Paulo by 2011.</p> <p>2. Diesel in rural areas currently 1,800 ppm. In some cities of states like: Rio de Janeiro, Sao Paulo, Espirito Santo, Minas Gerais, Parana, Maranhao e Piaui , it is 500 ppm sulphur, since January 2010.</p> <p>February 2011, the Environment Ministry unveiled Brazil's first national inventory of vehicular pollution. The inventory, covered the years from 1980 to 2009 found that diesel fuel, which emits large amounts of sulfur, was the main source of vehicular emissions.</p> <p>Biofuels: 55% of all fuel is ethanol. All new Brazilian cars are equipped with "flex-fuel" engines. 15 billion gallons, or 10% of all fuel sold by 2015. Total use of biofuels could grow to 20% by 2022. From Jan 2010, Brazil's National Energy Policy Council (CNPE) will require all diesel fuel in the country to contain 5 percent biofuel.</p>	<p>AMBIENTE - SEA. Supeintendência de Clima e Mercado de Carbono - via email March 2010</p>
Cayman Islands (BVI)	5000	<p>Diesel: Currently between 1000 to 5000ppm</p> <p>Esso and Chevron only licensed companies. Caribbean Utilities Company CUC is the largest buyer thus dictates the grade of</p>	

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			diesel fuel at the pumps	
Chile	50	30	<p>Diesel: From January 1, 2010 - 50 ppm diesel nationwide 15ppm gasoline and diesel down to 15 ppm from early 2011 in the metropolitan area;</p> <p>Blending of biofuels with gasoline or diesel fuel is voluntary in Chile [D.S. No. 11/08]. Only 2% or 5% blends of ethanol in gasoline or biodiesel in diesel fuel are allowed.</p> <p>USD 1 billion investment planned in upgrades; 2 state owned refineries ENAP</p>	<p>CONAMA Chile, ARPEL 2007 Centro Mario Molina Chile, national survey 2009</p> <p>Marcelo Fernández G. Control de Contaminación Atmosférica - Jan 2010</p>
Colombia	500	300	<p>Diesel: 50 ppm for Bogotá and the Nationwide Public Transport System from 1st Jan 2010 and 500 ppm Nationwide from 1st Jan 2010 then to go 50ppm Nationwide from 1st Jan 2013.</p> <p>58% of the diesel consumed in the country is imported, 42% produces locally. Colombia exports 40% of the nacional production of diesel.</p> <p>Gasoline : 300ppm gasoline nationwide since Dec 2010 - sold with 10% ethanol.</p> <p>100% of the gasoline consumed in the country is produced locally</p> <p>USD 4.5 million investment planned for 2 state refineries - ECOPETROL</p>	<p>National University of Colombia; ARPEL 2007 National survey 2011</p> <p>Economía 1 Jul 2010 http://www.elspectador.com/economia/articulo-211259-entregar-acpm-mas-limpio-ecopetrol-invierte-us8000-</p>

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				millones
Costa Rica	50	1000	<p>The national refinery (RECOPE) is in charge of all fuel importation. Costa Rica does not produce petroleum, although there are a number of bio-fuel operations. All fuel is imported, mainly from Mexico and Venezuela. RECOPE refines about 30% of the national consumption, importing the rest already refined.</p> <p>Diesel: January 2011, RECOPE switched to a low sulphur diesel 50ppm. RECOPE hopes to have the sulfur down to 15 parts per million by the end of 2014.</p> <p>New refinery to be built together with China National Petroleum Corporation (CNPC), USD\$ 1.2billion. This will triple the processing of crude oil in the country.</p>	
Cuba	8000	1200	Has some oil reserves and produces petrol. Dependant on oil imports from neighboring countries and Venezuela.	
Dominica			Imports its fuel.	
Dominican Republic	7500	1500	Net importer of petrol, 75% comes from Venezuela, rest from Colombia and Mexico. 2 Refineries on the island. Proposal for 50ppm limit *	* Battelle – USEPA 2009
Ecuador	7000	2000	<p>500 ppm fuel available in Quito and Cuenca. Plans for national reduction to 500 ppm in 2009 - delayed</p> <p>USD 1 billion investment required to reach 50 ppm diesel and petrol. 3 refineries. Member of OPEC</p>	ARPEL 2007
El Salvador	5000	1000	Imports its petroleum products from Ecuador, Chile, the US, and the Caribbean. Plan to decrease sulphur to 500 ppm by	

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			2010 - delayed Petrol vehicles should be equipped with catalytic converters.	
French Guiana			No refineries	
Grenada			Imports petrol from Venezuela.	
Guatemala	5000	1000	Has oil reserves and produces fuel for both export and local market. Plan to have maximum 500 ppm diesel and petrol by 2010 delayed	
Guyana			No refineries	
Haiti			Refined petroleum products are imported. Exxon, Royal Dutch Shell, and Texaco operate petrol stations in Haiti.	
Honduras	5000	1000	Imports its fuel. Plan to decrease fuel sulphur to 500 ppm by 2010 - delayed	
Jamaica	5000	1500	Imports part of its fuel. Petrojam refinery produces diesel oil, unleaded petrol and some bioethanol.	Jamaica aims to require 2% biodiesel additive.
Mexico	500	500	<p>Diesel: 15ppm in Mexico City. In other cities 250 ppm diesel plan to go 15ppm by end of 2009 however - PEMEX has not complied with the 2009 timeline to introduce 50 ppm diesel across the country- next deadline is by 2014 3.9% diesel imported</p> <p>Gasoline: Currently 30 ppm average /80 ppm max (Premium UBA) in all country from Oct 2006 and 500ppm (Magna UBA) in major cities planned to be available in all country end 2013 40% of gasoline imported</p>	<p>SEMARNAT, PEMEX</p> <p>INE - March 2010</p>

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			6 refineries – plans to upgrade. PEMEX monopoly. Non-OPEC	
Montserrat				
Nicaragua	5000	1000	Net importer of fuel from Venezuela. One refinery. Plan to have maximum 500ppm fuel by 2010 - delayed	ARPEL 2005
Panama	3000*	1000	Almost all fuel is imported. Diesel: 500ppm available – distributed by Colombian company Terpel	* Also has Diesel Liviano Grado 2D (500) with max sulfur of 500ppm - Battelle – USEPA 2009
Paraguay	5000	1000	No refineries PDVSA major provider of fuels. 78% of vehicles are diesel and 22% gasoline or flex	ARPEL 2007 PCFV national survey 2009
Peru	5000	2000	Diesel: Government decree of July 2005 provides for reduction to 50 ppm metropolitan, 1500 nationwide diesel as of 2010 – <i>still to be confirmed</i> . Only Lima and Callao are 50ppm from March 1 st 2010. 7 refineries, USD 1 billion required for upgrades. USD \$330 million loan from World Bank to assist	USEPA Daily Environment Report 'Peru Cracks Down on 'Dirty' Diesel Fuel, Sets Deadline for Cutting Sulfur Content' Centro Mario Molina Chile, - national survey 2009 International

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				Fuel Quality Center ifqc@ifqc.org
Puerto Rico	15	15	US current fuel standards used.	
St Kitts and Nevis			Net importer of fuel (mainly diesel).	
Saint Lucia			Imports all its fuel. Plans to construct a refinery.	
St Vincent and the Grenadines			Net importer of fuel from US and Venezuela.	
Suriname	5000	300	Net importer of fuel.	ARPEL 2005
Trinidad and Tobago	1500	500	Own reserves of oil, produces diesel and petrol. Petrotrin plans 3 year investments to launch low sulphur fuel production.	ARPEL 2005
Turks and Caicos Islands				
Uruguay	7000	700	<p>Diesel: 50 ppm diesel, planned for late 2012 nationally - after refinery upgrades completed. (90% less sulfur than current standards)</p> <p>Gasoline: 30 ppm petrol planned for late 2012 nationally</p> <p>Plans to establish a biodiesel plant and an ethanol plant in the country.</p> <p>1 refinery – La Teja</p>	<p>ARPEL 2007</p> <p>http://acau.com.uy/index.php?option=com_content&view=article&id=181:cantidad-de-azufre-en-naftas-y-gasoil-bajara-90-el-proximo-ano-&catid=17:eventos&Itemid=37</p>
Venezuela	5000	1500	<p>Diesel: 2000 ppm diesel, was planned for 2010 - - <i>Still to verify</i></p>	<p>ARPEL 2007</p> <p>APS Review Downstream</p>

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			Gasoline: 400 ppm petrol was planned for 2010, - <i>Still to verify</i> 5 refineries. Member of OPEC Only 20% of oil production is light, announced in September 2009 that it would invest \$17bn to improve facilities to refine its large reserves of ultra-heavy oil.	Trends 2009
Virgin Islands	15	15	15 ppm USA diesel rule 500 ppm non-road sulphur limit are applied.	
Total: 42 countries				

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