

Biodiesel Specification in Indonesia

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Introduction

- In August 2013, the Indonesian government (through Energy and Mineral Resources Ministerial Decree No. 23/2013) decided that by 2016, the biodiesel blend level in automotive diesel fuel must already reach 20 %.
- To implement this policy, the National Technical Committee on Biofuel Standard then conducted numerous stakeholders' meetings and organized the needed tests to improve the then existing biodiesel specification (SNI 7182 - 2012) and thus formulating a new quality standard that would allow the 20 %-vol blend level of biodiesel.
- The result of this activity is the present national specification (or quality standard) : SNI 7182-2015.

Biodiesel specification in Indonesia (SNI 7182-2015)

No.	Test Parameter	Unit	Limit
01.	Density 40 °C	kg/m ³	850 – 890
02.	Kinematic viscosity at 40 °C	mm ² /s (cSt)	2,3 – 6,0
03.	Cetane number	-	Min. 51
04.	Flash point (closed cup)	°C	Min. 100
05.	Cloud point	°C	Max. 18
06.	Copper strip corrosion(3 hrs, 50 °C)	-	Number 1
07.	Carbon residue in : - Original sample - or 10 % residue of distillation	%-mass	Max. 0,05 Max. 0,3
08.	Water and sediment	%-volume	Max. 0,05
09.	90 %-distillation temperature	°C	Max. 360
10.	Sulfated ash	%-mass	Max. 0,02

Biodiesel specification in Indonesia (cont.)

No.	Test Parameter	Unit	Limit
11.	Sulfur	mg/kg	Max. 50
12.	Phosphorous	mg/kg	Max. 4
13.	Acid value	mg-KOH/g	Max. 0,5
14.	Free Glycerol	%-mass	Max. 0,02
15.	Total Glycerol	%-mass	Max. 0,24
16.	Methyl ester content	%-mass	Min. 96,5
17.	Iodine Value	g-I ₂ /100 g	Max. 115
18.	Oxidative Stability : - Rancimat Induction Period - or Petro-Oxy Induction Period	minute	Min. 480 Min 36
19.	Monoglyceride	%-mass	Max. 0,8

Improvements over the 2012 specification

- Maximum limit of sulfur content decreased from 100 ppm w/w to 50 ppm w/w.
- Maximum limit of phosphorous content decreased from 10 ppm w/w to 4 ppm w/w.
- Maximum limit of acid value decreased from 0.6 to 0.5 mg-KOH/g.
- Minimum limit of Rancimat Induction Period increased from 360 minutes (6 hrs) to 480 minutes (8 hrs); correspondingly the minimum limit of Petro-Oxy Induction Period increased from 27 minutes to 36 minutes.
- A new quality parameter, monoglyceride content, is introduced and its maximum limit is set at 0.8 %-mass.

Preparation for the utilization of B30 in 2020

- Through Energy and Mineral Resources Ministerial Decree No. 12/2015, the government has recently decided that the biodiesel blend level in automotive diesel fuel will be increased to 30 % starting in January 2020.
- Initial discussion and tests to implement this policy is now underway.
- Preliminary study conducted by the Agency for Assessment and Application of Technology indicated that the maximum limit of monoglyceride content should be decreased to 0.6 %-mass. Further study is ongoing.
- So far no complain is received on the minimum limit of oxidatif stability (perhaps because , in practice, the Rancimat Induction Period of Indonesian biodiesel is usually more than 10 haours, as the biodiesel is presently made using palm oil as raw material.

THANK YOU VERY MUCH

for your attention



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