

DRAFT BIOMETHANE SPECIFICATION

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Doc #:

ED002-COJ-CNG-SPEC-002-RA

Project: City of Johannesburg Organic Waste to Biomethane Plant

1 Purpose

This document sets out the quality specification for the biomethane to be produced by the CoJ Biomethane plant for use as fuel in busses.

2 Specification

Constituent/Impurity	Units	Manufacturing Specification
Methane Purity*	%	≥95.00
Water Content (250barg at -10degC dp)	mg/m ³	<8
Oxygen (O ₂)	%	≤1
Nitrogen (N ₂)*	%	≤3
Carbon Dioxide (CO ₂)*	%	≤2
Carbon Monoxide (CO)	%	≤0.2
Hydrogen Sulphide (H ₂ S) Includes Carbonyl Sulphide (COS)	mg/Nm ³	≤5
Ammonia (NH ₃)	mg/Nm ³	≤3.0
Total Sulphur (S)	mg/Nm ³	≤10.0
Hydrogen (H ₂)*	%v/v	<2
Mercaptans	mg/Nm ³	≤6
Total Hydrocarbons	mg/Nm ³	≤5
Halocarbons	mg/Nm ³	≤1(Cl) ≤10 (F)
Heavy metals	µg /Nm ³	≤1(µg, Hg)
Siloxanes (Silicon content)	mg/Nm ³	≤0.1
Odorant	mg/Nm ³ THT	15-40
Particles		Technically free
Higher Heating Value	MJ/kg	≥ 50
Oil (At refuelling point)	mg/kg	Technically free
Note: All units by volume except where otherwise indicated		