

Petroleum Refinery and Renewable Diesel Applications Datasheet

The static optics IRmadillo has been successfully calibrated to measure regulated chemical and physical properties across many different streams in petroleum refining. Once installed on-line the IRmadillo will be able to continuously output measurements for these species in real-time, for enhanced process monitoring and control, replacing the need for frequent and laborious traditional testing techniques.



Application	Species	Accuracy	Minimum concentration	Maximum concentration	Units
Diesel	API Gravity	0.278	34	36	
	Biodiesel	0.188	0	10	%
	Cloud Point	1.721	-3	8	Deg F
	Flash Point	4.596	125	155	Deg F
	Sulfur	2.618	3	15	ppm
	Recovered 50%	3.641	480	515	Deg F
	Recovered 90%	3.511	656	675	Deg F
Blended Gasoline	Aromatics	0.811	21	30	vol%
	Recovered 50%	5.322	155	208	Deg F
	Recovered 90%	3.354	260	325	Deg F
	Octane	0.282	87	91	wt%
	Olefins	0.247	0.3	1.5	vol%
	RVP	0.693	6.7	15	psi
	Sulfur	1.160	8.5	15	ppm
	Benzene	0.091	0.65	1.10	vol%
Tallow	FFA	0.454	0	6	
	Phosphorus	2.783	2	17	ppm
	Nitrogen	15.472	10	69	ppm
Transmix	API Gravity	0.493	45.7	48.6	
	Recovered 10%	6.525	190	229	Deg F
	Recovered 50%	7.737	375	424	Deg F
	Sulfur	28.290	159	345	ppm

Application	Species	Accuracy	Minimum concentration	Maximum concentration	Units
Heavy Reformate	Benzene	0.066	0.43	0.85	vol%
	Recovered 90%	2.277	348	360	DegF
	Recovered 50%	1.486	278	288	DegF
Gasoline Pre-blending	Total Aromatics	0.554	22	26	vol%
	C9+ aromatics	0.487	8	11.5	vol%
	o-Xylene	0.074	1.6	2.1	vol%
	Toluene	0.248	4.8	6.6	vol%
	Benzene	0.033	0.55	0.8	vol%
	RVP	0.179	12.2	14	psi
	Ethanol	0.061	0	4.5	wt%
	Oxygen	0.021	0	1.5	wt%
	API Gravity	0.336	62.0	64.3	
	MON	0.256	80.5	82.0	
	RON	0.284	85.5	88	
	Recovered 90%	3.774	295	320	Deg F
	Recovered 50%	2.413	193	212	Deg F
Naphtha	IBP	1.456	77	87	Deg F
	FBP	23.901	320	440	Deg F
	RON	0.662	82.5	85	
	API Gravity	0.390	69.5	71.5	
	RVP	0.346	11.5	13.6	psi
	Benzene	0.026	0.70	0.84	vol%
	Toluene	0.156	3.2	4.2	vol%
Crude	Sulfur	0.089	0.4	1.1	wt%
	API Gravity	0.993	23	33	

Interested in finding out more?

Contact us to find out more details. Let us know about your process and what you'd like to be able to measure in real time.

 +44 (0)1235 431260

 enquiries@keit.co.uk

 www.keit.co.uk



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