

Thermo Scientific Model 42 NO-NO₂-NO_x Analyzer Potential Interference Gas Responses

Potential Interferent		Model 42iLS			Model 42iHL		
Test Gas	Concentration	NO	NO ₂	NO _x	NO	NO ₂	NO _x
CO ₂	5.20%	0.001	0.004	0.004	0.001	0.003	0.004
CO ₂	15.60%	0	0.003	0.003	0.001	0.004	0.005
H ₂ O	1.00%	0	0	0	0.003	0.001	0.004
NO	15 ppm	14.9	0.1	15	15	-0.06	14.99
NO ₂	15 ppm	1.1	14	15	0.4	14.6	15
N ₂ O	10 ppm	0	0	0	0	0	0
CO	50 ppm	0	0	0	0	0	0
SO ₂	21 ppm	-0.01	0	-0.01	0.007	0	0.007
CH ₄	50 ppm	0	0	0	0	0	0
HCl	10 ppm	0	0.006	0.006	0	0.004	0.004
NH ₃ ¹	10 ppm	0	0	0	0.17	8.9	9.1
Sum of Responses		0.011	0.01	0.02	0.011	0.009	0.02
Span Value		160	152	160	160	152	160
% of Calibration Span		0.01%	0.01%	0.01%	0.01%	0.01%	0.01%

Acceptance Criteria found in Section 13.4 of Method 7E is the sum of responses must not be greater than 2.5% of the analyzer calibration span value.

¹NH₃ interferent results shown for the Model 42iHL was not used in calculation of interference response check because it is a known interferent with an approximate 1 ppm to 1 ppm positive bias in analyzers using stainless steel NO₂ to NO converters. Thermo recommends that NO_x analyzers with stainless steel NO₂ to NO converters must use a NH₃ scrubber when testing sources with potential HN₃ in the flue gas.

This document is subject to change without notice.