

# ISO 29903-1:2020-01 (E)

## Comparison of toxic gas data from different tests - Part 1: Guidance and requirements

---

<b>Contents</b>		<b>Page</b>
	<b>Foreword</b> .....	<b>iv</b>
	<b>Introduction</b> .....	<b>v</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>2</b>
<b>4</b>	<b>Combustion conditions</b> .....	<b>3</b>
4.1	General .....	3
4.2	Thermal environment .....	3
4.3	Ventilation .....	3
4.4	Characteristics of test specimens .....	4
<b>5</b>	<b>Toxic gas data</b> .....	<b>4</b>
5.1	Identification of toxic species .....	4
5.2	Different expressions for toxic gas data .....	4
5.2.1	General .....	4
5.2.2	Yields .....	5
5.2.3	Concentrations of toxicants .....	6
5.2.4	The contribution to FED (or FEC) from individual toxicants .....	6
5.2.5	Lethal toxic potency .....	6
5.2.6	Total amount of toxicant released .....	6
5.2.7	Production rates .....	6
5.3	Significance of analysis data .....	7
5.3.1	General .....	7
5.3.2	Limit of detection (LoD) .....	7
5.3.3	Measurement uncertainty .....	7
<b>6</b>	<b>Comparison/prediction of toxic gas data from different physical fire models</b> .....	<b>7</b>
6.1	General .....	7
6.2	Comparison principles .....	8
6.2.1	Fire stages .....	8
6.2.2	CO/CO <sub>2</sub> -ratio .....	8
6.2.3	Equivalence ratio .....	8
6.3	Comparison methodology .....	9
6.3.1	General .....	9
6.3.2	Assessment of available data .....	10
6.3.3	Comparison of data .....	10
6.3.4	Assessment of agreement .....	10
6.4	Prediction of data from one fire model to another .....	11
<b>7</b>	<b>Documentation</b> .....	<b>11</b>
	<b>Annex A (informative) Characteristics of physical fire models</b> .....	<b>13</b>
	<b>Annex B (informative) Influence of sampling and analysis on toxic gas data</b> .....	<b>16</b>
	<b>Bibliography</b> .....	<b>18</b>

