

# ISO 2611-1:2024-04 (E)

## Analysis of natural gas - Halogen content of biomethane - Part 1: HCl and HF content by ion chromatography

---

<b>Contents</b>		<b>Page</b>
	<b>Foreword</b> .....	<b>v</b>
	<b>Introduction</b> .....	<b>vi</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>1</b>
<b>4</b>	<b>Symbols and abbreviated terms</b> .....	<b>2</b>
	4.1 Symbols.....	2
	4.2 Abbreviated terms.....	2
<b>5</b>	<b>Principle</b> .....	<b>3</b>
<b>6</b>	<b>Reagents and consumables</b> .....	<b>3</b>
	6.1 General.....	3
	6.2 Water.....	3
	6.3 Aqueous solutions.....	3
	6.4 Chloride and fluoride stock standard solutions.....	3
	6.5 Chloride and fluoride standard solutions.....	3
	6.6 Chloride and fluoride calibration solutions.....	4
	6.7 Blank.....	4
	6.8 Eluents.....	4
	6.9 Quartz filters.....	4
	6.10 Syringe filters.....	4
	6.11 Sorbent tubes.....	4
<b>7</b>	<b>Apparatus</b> .....	<b>4</b>
	7.1 General.....	4
	7.2 Ion chromatography system.....	4
	7.3 Quality requirements for the separator column.....	5
<b>8</b>	<b>Sampling and sample pre-treatment</b> .....	<b>5</b>
	8.1 General.....	5
	8.2 Sampling equipment.....	5
	8.2.1 Filter.....	5
	8.2.2 Cartridges.....	5
	8.2.3 Pump.....	6
	8.3 Sampling.....	6
	8.3.1 Filter-based method.....	6
	8.3.2 Cartridge-based method.....	6
	8.3.3 Gas volume measurement.....	6
	8.4 Sample pre-treatment.....	6
	8.4.1 Filter-based method.....	6
	8.4.2 Cartridges-based method.....	6
<b>9</b>	<b>Procedure</b> .....	<b>7</b>
	9.1 General.....	7
	9.2 Calibration.....	7
	9.3 Measurement.....	7
<b>10</b>	<b>Calculation</b> .....	<b>7</b>
<b>11</b>	<b>Expression of results</b> .....	<b>8</b>

<b>12</b>	<b>Performance characteristics</b> .....	<b>9</b>
12.1	Calibration check .....	9
12.2	Performance data .....	9
<b>13</b>	<b>Test report</b> .....	<b>9</b>
<b>Annex A</b> (informative)	<b>Characteristics of the method</b> .....	<b>10</b>
<b>Annex B</b> (informative)	<b>Dynamic generation of HCl and HF</b> .....	<b>12</b>
<b>Bibliography</b>	.....	<b>13</b>