

# ISO 11337:2023-01 (E)

## Plastics - Polyamides - Determination of $\epsilon$ -caprolactam and $\omega$ -laurolactam by gas chromatography

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
<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>Method A: Extraction method .....</b>	<b>1</b>
4.1	Principle .....	1
4.2	Reagents .....	1
4.3	Apparatus and materials .....	2
4.4	Preparation of test sample .....	3
4.5	Procedure .....	4
4.5.1	Test portion .....	4
4.5.2	Extraction .....	4
4.5.3	Preparation of internal-standard solution .....	4
4.5.4	Preparation of sample solution .....	4
4.5.5	Preparation of calibration solution .....	4
4.5.6	Gas-chromatographic analysis of sample and calibration solutions .....	4
4.5.7	Evaluation of gas chromatographic peaks .....	5
4.6	Expression of results .....	5
4.7	Precision .....	5
4.8	Test report .....	6
<b>5</b>	<b>Method B: Dissolution method .....</b>	<b>6</b>
5.1	Principle .....	6
5.2	Reagents .....	6
5.3	Apparatus .....	7
5.4	Preparation of internal-standard solutions .....	8
5.4.1	General .....	8
5.4.2	Internal standard for unextracted polyamide 6 .....	8
5.4.3	Internal standard for extracted polyamide 6 .....	8
5.4.4	Internal standard for polyamide 12 .....	8
5.4.5	Preparation of calibration solutions .....	9
5.4.6	Calibration .....	10
5.5	Procedure .....	10
5.5.1	Preparation and injection of sample solution .....	10
5.5.2	Evaluation of gas-chromatographic peaks .....	10
5.5.3	Solvent recovery .....	10
5.6	Expression of results .....	11
5.7	Precision .....	11
5.8	Test report .....	11