

# DIN EN ISO 11132:2021-12 (E)

## Sensory analysis - Methodology - Guidelines for the measurement of the performance of a quantitative descriptive sensory panel ( ISO 11132:2021)

---

<b>Contents</b>		<b>Page</b>
	European foreword .....	3
	Foreword .....	4
	Introduction .....	5
<b>1</b>	<b>Scope</b> .....	<b>6</b>
<b>2</b>	<b>Normative references</b> .....	<b>6</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>6</b>
<b>4</b>	<b>Principle</b> .....	<b>8</b>
4.1	Two possible approaches .....	8
4.1.1	General .....	8
4.1.2	Performance measurement via a dedicated procedure .....	8
4.1.3	Ongoing monitoring via routine product profiling .....	9
4.2	Indicators of panel or individual assessor performance .....	9
4.3	Statistical analyses .....	10
<b>5</b>	<b>Prerequisites</b> .....	<b>10</b>
5.1	Experimental conditions .....	10
5.2	Qualification of assessors .....	10
<b>6</b>	<b>Performance measurement via a dedicated procedure</b> .....	<b>10</b>
6.1	Sample and attribute selection .....	10
6.2	Experimental designs .....	10
6.2.1	General .....	10
6.2.2	Randomized block design .....	11
6.2.3	Balanced and random designs .....	11
6.2.4	Same order design .....	11
6.3	Statistical analyses .....	12
6.4	Performance of the overall panel — Interpretation of statistical output .....	14
6.4.1	Key attribute discrimination .....	14
6.4.2	Agreement at panel level .....	14
6.4.3	Repeatability of the panel .....	15
6.5	Performance of individual assessors — Interpretation of statistical output .....	15
6.5.1	Discrimination ability of an assessor .....	15
6.5.2	Repeatability of an assessor .....	15
6.5.3	Consistency of an assessor .....	15
6.5.4	Agreement among assessors .....	16
6.5.5	Bias — Different use of scale .....	16
6.6	Performance issues .....	17
6.6.1	General .....	17
6.6.2	Panel .....	17
6.6.3	Individual assessor .....	17
6.7	Experimental design for following up the performance over time .....	17
<b>7</b>	<b>Procedure for ongoing monitoring via routine product profiling</b> .....	<b>17</b>
7.1	Attribute selection .....	17
7.2	Statistical analyses .....	17
7.3	Following up the performance over time .....	17
7.4	Statistical analysis of data over time .....	17
7.5	Statistical analysis of complete profiles .....	18
	<b>Annex A (informative) Example of a practical application</b> .....	<b>19</b>
	<b>Bibliography</b> .....	<b>27</b>