

# ISO/TR 16153:2004-10 (E)

## Piston-operated volumetric instruments - Determination of uncertainty for volume measurements made using the photometric method

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>iv</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Uncertainty analysis for the replaceable cell photometric method as described in ISO 8655-7:--, Annex A</b> .....	<b>1</b>
2.1	Uncertainties of each measurand .....	1
2.2	Mathematical model of method .....	2
2.3	Sensitivity coefficients .....	3
2.4	Uncertainty budget .....	14
<b>3</b>	<b>Uncertainty analysis for the flow cell photometric method as given in ISO 8655-7:--, Annex B</b> .....	<b>16</b>
3.1	Uncertainties of each measurand .....	16
3.2	Mathematical model of method .....	16
3.3	Sensitivity coefficients .....	16
3.4	Combined standard uncertainty .....	25
<b>4</b>	<b>Traceability of the method</b> .....	<b>25</b>
<b>5</b>	<b>Validation of photometric method</b> .....	<b>26</b>
5.1	Principle of validation .....	26
5.2	Equipment for validation .....	26
5.3	Density of solutions .....	26
5.4	Experimental results .....	26
5.5	Additional validation studies of the photometric method .....	27
<b>Bibliography</b> .....		<b>28</b>