

# ISO 18369-3:2017-08 (E)

## Ophthalmic optics - Contact lenses - Part 3: Measurement methods

---

<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>Methods of measurement for contact lenses .....</b>	<b>1</b>
4.1	General .....	1
4.2	Radius of curvature .....	2
4.2.1	General .....	2
4.2.2	Optical spherometry (rigid contact lenses) .....	3
4.2.3	Sagittal height method .....	6
4.3	Label back vertex power .....	11
4.3.1	General .....	11
4.3.2	Focimeter specification .....	11
4.3.3	Calibration .....	12
4.3.4	Focimeter measurement of rigid lenses .....	13
4.3.5	Focimeter measurement of hydrogel lenses .....	13
4.3.6	Measurement of hydrogel contact lenses by immersion in saline .....	13
4.3.7	Addition power measurement .....	14
4.4	Diameters and widths .....	14
4.4.1	Total diameter .....	14
4.4.2	Zone diameters and widths .....	19
4.5	Thickness .....	20
4.5.1	General .....	20
4.5.2	Dial gauge method .....	20
4.5.3	Low-force mechanical gauge method .....	21
4.6	Edge inspection .....	22
4.7	Determination of inclusions and surface imperfections .....	22
4.8	Spectral transmittance .....	23
4.8.1	General .....	23
4.8.2	Instrument specification, test conditions and procedure .....	23
4.9	Saline solution for testing .....	24
4.9.1	General .....	24
4.9.2	Formulation .....	24
4.9.3	Preparation procedure .....	25
4.9.4	Packaging and labelling .....	25
<b>5</b>	<b>Test report .....</b>	<b>26</b>
<b>Annex A (informative) Measurement of rigid contact lens curvature using interferometry .....</b>		<b>27</b>
<b>Annex B (informative) Measurement of label back vertex power of soft contact lenses immersed in saline using the Moiré deflectometer or Hartmann methods .....</b>		<b>29</b>
<b>Annex C (informative) Measurement of the radius of curvature of contact lenses using the ophthalmometer .....</b>		<b>33</b>
<b>Annex D (informative) Paddle support for focimeters used for power measurements of contact lenses .....</b>		<b>38</b>
<b>Bibliography .....</b>		<b>40</b>