

# ISO/TR 24422:2022-12 (E)

## Development of a water equivalent phantom to measure the physical characteristics of specific radiosurgery treatment devices

---

<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>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>1</b>
<b>4</b>	<b>Phantom manufacturing</b> .....	<b>3</b>
<b>4.1</b>	<b>Phantom description</b> .....	<b>3</b>
<b>4.2</b>	<b>Positioning of the inner inserts with respect to the mechanical centre</b> .....	<b>5</b>
<b>4.3</b>	<b>Electron density calculation and determination of polystyrene phantom radius</b> .....	<b>6</b>
<b>5</b>	<b>Measurement methods and results</b> .....	<b>7</b>
<b>5.1</b>	<b>Beam quality correction factor</b> .....	<b>7</b>
<b>5.2</b>	<b>Measurement of the beam profile</b> .....	<b>7</b>
<b>5.3</b>	<b>Measurement of FWHM - physical penumbra and sharpness</b> .....	<b>8</b>
<b>5.4</b>	<b>Uncertainty analysis</b> .....	<b>10</b>
<b>Bibliography</b> .....		<b>11</b>