



**nordion**  
SCIENCE ADVANCING HEALTH

**DOSIMETRY  
PRODUCTS & SERVICES**

2016 PRICE LIST



**nordion**  
SCIENCE ADVANCING HEALTH

## Dosimetry Products & Services

### Dosimetry and Calibration Products and Services

All prices are in Canadian Dollars.

Delivery for most items is 6 weeks subject to confirmation at time of order.

Nordion's Dosimetry Laboratory is accredited under NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for the following services:

- The calibration of routine dosimeters against Ceric-Cerous or Alanine reference-standard dosimeters.
- The evaluation of Ceric-Cerous or Alanine reference-standard dosimeters.
- The irradiation of customer-supplied dosimeters to known doses.

Accredited services are identified with this symbol.  
Refer to <http://ts.nist.gov/standards/scopes/ionra.htm>.






NVLAP LAB CODE 200370-0



## Dosimetry and Calibration Services


### 1. Supply and Reading of Dosimeters

NUMBER	DESCRIPTION	PRICE
10009989	<b>Supply and Reading of Low Dose Range Ceric-Cerous Dosimeters</b>	\$370.00 per dosimeter
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Supply and reading of each dosimeter</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Ceric-Cerous measured dose)</li><li>– Standard Control package (shipped with package for QC)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Minimum order: 7 dosimeters</li><li>– Dose range: 0.5 to 6 kGy</li><li>– This measurement service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	
10009991	<b>Supply and Reading of High Dose Range Ceric-Cerous Dosimeters</b>	\$370.00 per dosimeter
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Supply and reading of each dosimeter</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Ceric-Cerous measured dose)</li><li>– Standard Control package (shipped with package for QC)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Minimum order: 7 dosimeters</li><li>– Dose range: 5 to 50 kGy</li><li>– This measurement service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	
10094113	<b>Supply and Reading of Alanine Dosimeters</b>	\$370.00 per dosimeter
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Supply and reading of each dosimeter</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Alanine measured dose)</li><li>– Standard Control package (shipped with package for QC)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Minimum order: 7 dosimeters</li><li>– Dose range: 20 Gy to 80 kGy</li><li>– This measurement service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	



## Dosimetry and Calibration Services



### 2. Irradiation of Dosimeters

NUMBER	DESCRIPTION	PRICE
10009995	<b>Irradiation of Dosimeters</b>	\$735.00 per dose point
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Irradiation of dosimeters (e.g. Harwell, Alanine in pellet or film format, Red Perspex, Amber Perspex, FWT-60 radiochromic film, Optichromic) to specified absorbed doses in Nordion’s standard cobalt 60 radiation field GC220 at a customer-specified constant temperature</li><li>– NVLAP Lab Code 200370-0 Certificate of Accuracy supplied with return of dosimeters to customer</li></ul> <p>Customer to specify:</p> <ul style="list-style-type: none"><li>– Number of dose points</li><li>– Number of dosimeters (maximum 10) for each dose point</li><li>– Irradiation temperature in degrees C</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Specified doses up to 250 kGy</li><li>– Specified irradiation temperature to be between +4°C and +60°C</li><li>– Each dosimeter must fit into a 12mm (0.5 inches) diameter cylinder with maximum height of 75mm (3 inches)</li><li>– This irradiation service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	





## Dosimetry and Calibration Services

### 3. In-Plant Calibration

NUMBER	DESCRIPTION	PRICE
10009996	<b>Routine Dosimetry System In Plant Calibration Service – High Dose Dosimeters – Ceric-Cerous</b>	\$6,485.00 per batch of dosimeters
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Supply of 10 Calibration packages, each package containing 2 high-dose Ceric-Cerous dosimeters and 1 temperature strip for measurement of maximum irradiation temperature</li><li>– Standard Control Package (for Nordion QC)</li><li>– Determination of calibration curve for routine dosimetry system for 1 spectrophotometer</li><li>– NVLAP Lab Code 200370-0 Certificate of Calibration for the routine dosimetry system</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Ceric-Cerous measured dose)</li></ul> <p>Plus:</p> <ul style="list-style-type: none"><li>– Review of readings obtained by customer for the irradiated routine dosimeters</li><li>– Analysis of dosimetry data</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– This calibration service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	
10009998	<b>Routine Dosimetry System In Plant Calibration Service – Low Dose Dosimeters – Ceric-Cerous</b>	\$6,485.00 per batch of dosimeters
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– 10 Calibration packages; each package contains 2 low-dose Ceric-Cerous dosimeters and 1 temperature strip for measurement of maximum irradiation temperature</li><li>– Standard Control Package (for Nordion QC)</li><li>– Reading of dosimeters after return to Nordion</li><li>– Determination of calibration curve for routine dosimetry system for 1 spectrophotometer</li><li>– NVLAP Lab Code 200370-0 Certificate of Calibration for the routine dosimetry system</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Ceric-Cerous measured dose)</li></ul> <p>Plus:</p> <ul style="list-style-type: none"><li>– Review of readings obtained by customer for the irradiated routine dosimeters</li><li>– Analysis of dosimetry data</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– This calibration service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	




## Dosimetry and Calibration Services

NUMBER	DESCRIPTION	PRICE
10094111	<b>Routine Dosimetry System In Plant Calibration Service – Low Range and High Range Dose Dosimeters (0.5 to 50 kGy) – Ceric-Cerous</b>	\$6,485.00 per batch of dosimeters
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– 7 Calibration packages; each package contains 2 high-dose Ceric-Cerous dosimeters and 1 temperature strip for measurement of maximum irradiation temperature</li><li>– 3 Calibration packages; each package contains 2 low-dose Ceric-Cerous dosimeters and 1 temperature strip for measurement of maximum irradiation temperature</li><li>– 2 spare packages (1 low-dose and 1 high-dose Ceric-Cerous dosimeters)</li><li>– Standard Control Packages (for Nordion QC)</li><li>– Determination of calibration curve for routine dosimetry system for 1 spectrophotometer</li><li>– NVLAP Lab Code 200370-0 Certificate of Calibration for the routine dosimetry system</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Ceric-Cerous measured dose)</li></ul> <p>Plus:</p> <ul style="list-style-type: none"><li>– Review of readings obtained by customer for the irradiated routine dosimeters</li><li>– Analysis of dosimetry data</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– This calibration service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	
10094114	<b>Routine Dosimetry System In Plant Calibration Service – Alanine Dosimeters</b>	\$6,485.00 per batch of dosimeters
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– Supply of 10 Calibration packages, each package containing 2 high-dose Alanine dosimeters and 1 temperature strip for measurement of maximum irradiation temperature</li><li>– Standard Control Package (for Nordion QC)</li><li>– Determination of calibration curve for routine dosimetry system for 1 spectrophotometer</li><li>– NVLAP Lab Code 200370-0 Certificate of Calibration for the routine dosimetry system</li><li>– NVLAP Lab Code 200370-0 Certificate of Measurement (Alanine measured dose)</li></ul> <p>Plus:</p> <ul style="list-style-type: none"><li>– Review of readings obtained by customer for the irradiated routine dosimeters</li><li>– Analysis of dosimetry data</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– This calibration service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li></ul>	



## Dosimetry and Calibration Services



### 4. Additional In-Plant Calibration

NUMBER	DESCRIPTION	PRICE
10009997	<b>Additional In-Plant Calibrations – In-Plant Calibration Service</b>	\$1,630.00 per additional calibration curve
 NVLAP LAB CODE 200370-0	Includes: – Supply of one additional calibration curve	
	Note: – This service is additional to Routine Dosimetry System In Plant Calibration Service – This calibration service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0	



## Dosimetry and Calibration Services

### 5. Absorbed Dose Mapping

NUMBER	DESCRIPTION	PRICE
10093660	<b>Absorbed Dose Mapping for a Production Irradiator – Ceric-Cerous</b>	\$16,225.00*
 <small>NVLAP LAB CODE 200370-0</small>	<p><b>Includes:</b></p> <ul style="list-style-type: none"> <li>– Dose mapping service for 1 production irradiator using 1 batch of customer supplied routine dosimeters, read on a maximum of 2 spectrophotometers</li> <li>– Nordion will provide procedures for performing absorbed dose mapping</li> <li>– Dosimeter packages consisting of Ceric-Cerous dosimeters and temperature strips (the customer adds 4 routine dosimeters)</li> <li>– Analysis of customer’s routine dosimeter readings done at the customer’s site by customer’s technicians</li> <li>– Dosimetry Report prepared by Nordion</li> </ul> <hr/> <p><b>Additional Customer Responsibilities:</b></p> <ul style="list-style-type: none"> <li>– Provide all routine dosimeters</li> <li>– Provide phantom material or homogeneous actual product which occupies the design limit of the carrier (or close to the design limit)</li> <li>– Ensure that dosimetry can be done on a schedule that is agreed to by Nordion.</li> <li>– Ensure availability of sufficient resources for loading product, operating the irradiator, and loading/retrieving dosimeters</li> </ul> <hr/> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>– This dose mapping service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li> </ul>	
10094112	<b>Absorbed Dose Mapping for a Production Irradiator – Alanine</b>	\$16,225.00*
 <small>NVLAP LAB CODE 200370-0</small>	<p><b>Includes:</b></p> <ul style="list-style-type: none"> <li>– Dose mapping service for 1 production irradiator using 1 batch of customer supplied routine dosimeters, read on a maximum of 2 spectrophotometers</li> <li>– Nordion will provide procedures for performing absorbed dose mapping</li> <li>– Dosimeter packages consisting of Alanine dosimeters and temperature strips (the customer adds 4 routine dosimeters)</li> <li>– Analysis of customer’s routine dosimeter readings done at the customer’s site by customer’s technicians</li> <li>– Dosimetry Report prepared by Nordion</li> </ul> <hr/> <p><b>Additional Customer Responsibilities:</b></p> <ul style="list-style-type: none"> <li>– Provide all routine dosimeters</li> <li>– Provide phantom material or homogeneous actual product which occupies the design limit of the carrier (or close to the design limit)</li> <li>– Ensure that dosimetry can be done on a schedule that is agreed to by Nordion</li> <li>– Ensure availability of sufficient resources for loading product, operating the irradiator, and loading/retrieving dosimeters</li> </ul> <hr/> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>– This dose mapping service by Nordion is accredited under NIST’s NVLAP Lab Code 200370-0</li> </ul>	

\*Per absorbed dose mapping service (if performed in conjunction with a source loading). Expenses charged as incurred if not performed with a source loading.





## Dosimetry and Calibration Products



### 1. Compu-dose System

<b>NUMBER</b>	<b>DESCRIPTION</b>	<b>PRICE</b>
10009980	<b>Compu-Dose System</b>	\$17,535.00
	Includes: <ul style="list-style-type: none"><li>– Electrochemical Cell</li><li>– Multimeter (3M052526)</li><li>– 500 High Dose Range (5 to 50 kGy) Ceric-Cerous dosimeters (including 30 irradiated standards: 10@ 15, 10 @ 25, 10 @ 35 kGy)</li><li>– Compu-Dose Manual (IN/OM 0312 CDOSE)</li><li>– Certificate of Calibration (for Ceric-Cerous batch)</li><li>– Certificate of Accuracy (for Ceric-Cerous irradiated standards)</li><li>– Electrochemical Cell Set-up Instructions and Certificate of Acceptance</li><li>– Compu-dose software, PC software including data set for converting multimeter readings to dose (kGy)</li></ul>	
	Note: <ul style="list-style-type: none"><li>– Special order standards available at extra cost (refer to 10009983)</li></ul>	
10094115	<b>Compu-Dose Software</b>	\$4,095.00
	Includes: <ul style="list-style-type: none"><li>– Software on CD (includes data set for converting multimeter reading to dose – kGy)</li></ul>	
H101402001	<b>Replacement Electrochemical Cell</b>	\$5,250.00
	Includes: <ul style="list-style-type: none"><li>– Compu-Dose glass cell</li></ul>	



## Dosimetry and Calibration Products

### 2. Ceric-Cerous Dosimeters

NUMBER	DESCRIPTION	PRICE
10009982	<b>High Dose Range (5 to 50 kGy) Ceric-Cerous Dosimeters</b>	\$1,180.00 per 100
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– 100 high dose range dosimeters (including 6 irradiated standards: 2 @ 15, 2 @ 25, 2 @ 35 kGy)</li><li>– Data Set for converting multimeter readings to dose (kGy)</li><li>– NVLAP Lab Code 200370-0 Certificate of Calibration (for Ceric-Cerous batch)</li><li>– NVLAP Lab Code 200370-0 Certificate of Accuracy (for Ceric-Cerous irradiated standards)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Special order standards available at extra cost (refer to 10009983)</li></ul>	
10009984	<b>Low Dose Range (0.5 to 6 kGy) Ceric-Cerous Dosimeters</b>	\$1,180.00 per 100
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– 100 low dose range dosimeters including 6 irradiated standards (2 @ 1, 2 @ 3, 2 @ 5 kGy)</li><li>– NVLAP Lab Code 200370-0 Certificate of Accuracy (for Ceric-Cerous irradiated standards)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– Special order standards available at extra cost (refer to 10009985)</li><li>– The customer is responsible for determining their own calibration curve to convert multimeter readings to dose. Guidance is found in the Compu-Dose Operator's Manual IN/OM 0312 CDOSE</li></ul>	



## Dosimetry and Calibration Products


### 3. Irradiation Standards

<b>NUMBER</b>	<b>DESCRIPTION</b>	<b>PRICE</b>
10009983	<b>High Dose Range (5 to 50 kGy) Ceric-Cerous</b>	\$895.00 per batch of 10 standards
	Includes: – 10 dosimeters at 1 dose level as specified by customer	
	Note: – Nordion manufactures new batches as required and therefore cannot guarantee availability of a specific batch	
10009985	<b>Low Dose Range (0.5 to 6 kGy) Ceric-Cerous</b>	\$895.00 per batch of 10 standards
	Includes: – 10 dosimeters at 1 dose level as specified by customer	
	Note: – Nordion manufactures new batches as required and therefore cannot guarantee availability of a specific batch	



## Dosimetry and Calibration Products

### 4. Calibration Standards

NUMBER	DESCRIPTION	PRICE
10009986	<b>Irradiated Standards (Low-Dose CC) for Generating the Calibration Curve</b>	\$1,180.00 per 35
 NVLAP LAB CODE 200370-0	<p>Includes:</p> <ul style="list-style-type: none"><li>– 35 irradiated standards for determination of response function (5 each at 7 nominal dose levels: 0.5, 1, 2, 3, 4, 5, 6 kGy per dosimeter batch)</li><li>– NVLAP Lab Code 200370-0 Certificate of Accuracy (for Ceric-Cerous irradiated standards)</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>– For customers who need to establish a calibration curve based on Nordion irradiated standards</li><li>– Special order standards available at extra cost (refer to 10009985)</li></ul>	

**Please note:**

1. READING OF CUSTOMER SUPPLIED DOSIMETERS has been discontinued. However, Nordion can supply and read HR and LR CCDs.
2. Supply and reading of Fricke Dosimeters has been transferred to Best Theratronics Ltd.



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Nordion's products and services are used throughout the world to prevent, diagnose and treat disease. Our applied research and innovation play an integral part in improving global healthcare.

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