

Casella Noise Dosimeter Model CEL – 350 Instructions

****IMPORTANT - Retrieve the data from the dosimeters prior to returning to Travelers Laboratory****

Initial Equipment Checks

- Visually inspect all equipment upon receipt.
- For best results, charge the dosimeters overnight prior to use. The status indicator on the dosimeter will flash **red** when the unit is charging and is solid **blue** when the charging is complete. “BATTERY FAIL” on the display indicates that charging is required before the dosimeter can be used.
- Additional assistance is available by:
 - > Viewing the Casella Noise Dosimeter Model CEL-350 Instructional Video at: [Travelers - Instructional Videos](#)
 - > Calling the Instrument Laboratory at (800) 842-0355 (Eastern time zone 7:00 am to 5:00 pm)

Dosimeter Calibration (calibrate immediately prior to sampling)

- Turn the dosimeter on by pressing the LEFT button.
- Remove the windscreen by carefully turning the black plastic ring at the base of the windscreen counter clockwise. **Do not twist the foam windscreen – it will tear.**
- Turn the calibrator on with the **red** button. **Ensure that the calibrator is emitting a tone before proceeding to the next step.**
- Insert the calibrator onto the microphone so that o-ring in the calibrator forms a seal with the dosimeter microphone and the dosimeter screen is still visible.
- The display will indicate “CALIBRATE? 114”, press the RIGHT button on the dosimeter to confirm calibration. “CALIBRATING” with an indicator across the bottom of the screen will appear on the display.
- When completed, the display will read “CAL OK” for a few seconds. Press the RIGHT button until the current sound level data (LAS) is displayed (about 114 dB). Record this data as your PRE sampling calibration verification and remove the calibrator from the microphone.
- **Carefully** replace the windscreen onto the dosimeter microphone by gently turning the black plastic ring clockwise. **Do not twist the foam windscreen – it will tear.**
- Repeat calibration for the remainder of dosimeters. The calibrator will turn off automatically.



Collecting Noise Samples

- To begin data collection, press the LEFT and RIGHT buttons simultaneously until the display counts down “start 3, 2, 1”. Release the buttons when the battery/memory indicators and the recording indicator “▶” appear on the display.
- Optionally, the dosimeter can be placed in secure mode by holding the RIGHT button and pressing the LEFT button three times. The locked icon (🔒) will be visible in lower left corner of the display.
- Attach the dosimeter to the clothing of the employee at the shoulder, near the employee’s ear using the clips.
- When sampling is done, remove dosimeter from the employee. If it was previously placed in secure mode, remove it from secure mode by holding the RIGHT button and pressing the LEFT button three times. The locked icon (🔒) will disappear, the recording indicator “▶” will still be displayed.

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- To stop data collection, press the LEFT and RIGHT buttons simultaneously until the display counts down “stop 3, 2, 1”. Release the two buttons when the battery/memory indicators appear on the display. The recording indicator “▶” will disappear.
- Perform a post sampling calibration verification by removing the windscreen and placing an active calibrator on microphone. When the display indicates “CALIBRATE? 114”, press the LEFT button. With the calibrator still on the unit, press the RIGHT button until the current sound level data (LAS) is displayed. Record this data as your post sampling calibration verification.
- Retrieve the test data from the dosimeter(s) and record the items (*) below on your data sheet. Press the RIGHT button repeatedly to scroll through the results as follows:

LAS current sound level measurement (used for calibration verifications)

* **DURATION** **time monitored in hours:minutes:seconds**

LZPK Not used

* **T80 DOSE** **noise dose for the test period using the 80 dBA threshold (units are %)**

* **T80 P DOSE** **projected noise dose for an 8-hour exposure using the 80 dBA threshold (units are %)**

* **T80 LAVG** **projected average noise level for an 8-hour dose using the 80 dBA threshold (in dBA)**

T80 TWA Not used

* **T90 DOSE** **noise dose for the test period using the 90 dBA threshold (units are %)**

* **T90 P DOSE** **projected noise dose for an 8-hour exposure using the 90 dBA threshold (units are %)**

* **T90 LAVG** **projected average noise level for an 8-hour dose using the 90 dBA threshold (in dBA)**

T90 TWA Not used

- Turn off the dosimeter by pressing and holding the LEFT button - the display will show “switch off 3, 2, 1”. Release the button when the display disappears.

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INDUSTRIAL HYGIENE SURVEY DATA – NOISE DOSIMETRY

SAVE THIS DATA SHEET AND EMAIL A COPY TO Tate Berkan at TBerkan@Travelers.com

Survey Date: _____	Company Name: _____
Name: _____	Street Address: _____
Email Address: _____	City, State, Zip Code: _____

Dosimeter #: 123456789		Employee Name: John Smith						
Job Task: Line 1 Operator		Comments: Typical Operation						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG
114	114.1	7:30:15	48.0	57.1	86.0	17.2	20.5	78.6

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

Dosimeter #:		Employee Name:						
Job Task:		Comments:						
Calibration (dB)		Duration		80 dBA Threshold		90 dBA Threshold		
PRE	POST	(hours:mins:secs)	T80 Dose %	T80 P Dose %	T80 LAVG	T90 Dose %	T90 P Dose %	T90 LAVG

	Threshold	LAVG	P Dose
OSHA Action Level (Requires Hearing Conservation Program)	80 dB	85 dBA	50%
OSHA Criterion Level (Mandatory Controls/Hearing Protection)	90 dB	90 dBA	100%

dBA: Decibels, A-weighted, slow response.
 PRE: Pre-sampling calibration verification - Sound level (LAS), in dBA.
 POST: Post-sampling calibration verification - Sound level (LAS), in dBA.
 Threshold: Decibel level at which the dosimeter begins accumulating data. Noise levels below the threshold are ignored by the dosimeter.



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