

Geometrics Knowledgebase

Does the cesium in my magnetometer represent a health risk?

The cesium used in our magnetometers sensors is the non-radioactive elemental metal, isotope Cs 133. We employ approximately 120 to 240 micrograms of cesium metal in the sensor divided between the lamp and absorption cell. These are small glass ampules, each containing a volume of 1/32 to 1/16 of a cubic millimeter of cesium. If either or both the lamp and cell should break the cesium will instantaneously react with the air and moisture in the air to become Cs₂O and/or CsOH. Both compounds are caustic but the quantity is so small that it is of no health concern. Finally, the lamp and the cell ampules are contained in a G10 housing that is then contained inside a sealed PVC housing. If the sensor should cease working due to a broken lamp and/or cell, it is not field repairable. Return the sensor to Geometrics for repair, replacement and/or disposal.

<http://support.geometrics.com/kb/questions.php?questionid=86>