

## Why is Lead Not Included in the Chemical Database?

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Lead is a non-cancer toxicant which is known to cause central nervous system (CNS) effects in children. The U.S. Environmental Protection Agency (USEPA) has established reference dose (RfD) values for a large number of non-cancer toxicants. Exposure to a compound at a level below the RfD is assumed to be safe. However, studies of lead toxicity have not established a "safe" exposure limit for lead. Therefore, the USEPA has not established an RfD for lead. RfD values for lead are not provided in the USEPA IRIS database or in any other toxicity database widely used to select toxicity values for the RBCA process. In the RBCA process, the RfD value is required to calculate the risk-based cleanup standard (RBSL or SSTL) for a non-cancer toxicant. Because no widely accepted RfD value has been established for lead, it is not possible to include lead in the RBCA Tool Kit database. Lead can be added to the software using the "Add New Chemical" tool. However, the user will be required to provide an RfD value and other relevant chemical parameters.

The U.S. EPA has established an action level for drinking water limit of 0.015 mg/L. In addition, the state of Texas has established a limit of 500 mg/kg for direct exposure to residential soils, and Louisiana has established a limit of 400 mg/kg for direct exposure to residential soils. However, none of these limits are risk-based limits.