

Maximum Allowable Discharge Concentrations for Heavy Metals in China

National Standard of the People's Republic of China Integrated Wastewater Discharge Standard GB 8978 - 1996			EPA	
No.	Pollutant	Maximum Allowable Discharge Concentration (Units: mg/L)	Potential Effects of Excessive Discharge	Sources of Contaminant in Drinking Water
1	Total Mercury	0.05	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
2	Alkyl Mercury	Below detection limit	Not defined in the EPA list	Not defined in the EPA list
3	Total Cadmium	0.1	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
4	Total Chromium	1.5	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits
5	Chromium (VI)	0.5	Under evaluation	Chromium is widely used in manufacturing processes, and it can be found in many consumer products such as wood treated with copper dichromate, leather tanned with chromic sulfate, and stainless steel cookware. Chromium is released to the environment from natural and anthropogenic sources, with the largest releases occurring from industrial sources

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6	Total Arsenic	0.5	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes
7	Total Lead	1	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits
8	Total Nickel	1	Not defined in the EPA list	Not defined in the EPA list
9	Benzo(a)pyrene	0.00003	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines
10	Total Beryllium	0.005	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
11	Total Silver	0.5	Skin discoloration	Silver is used as an antibacterial agent in many home water treatment devices
12	Total a Radioactivity	1 Bq/L	Increased risk of cancer	Erosion of natural deposits; nuclear power plant accidental releases
13	Total b Radioactivity	10 Bq/L	Increased risk of cancer	Erosion of natural deposits; nuclear power plant accidental releases

Source: China Water Risk: based on the National Standard of the People's Republic of China Integrated Wastewater Discharge Standard GB 8978 – 1996 and the US Environmental Protection Agency drinking water contaminants list Risks: The water contaminants type of risks is based on the [US Environmental Protection Agency definitions](#) National Standard of the people's Republic of China Integrated Wastewater Discharge Standard GB 8978 – 1996 Issued on 4 October 1996/Effective on 1 January 1998 Issued by National Environmental Protection Bureau State Technology Supervision Bureau