

Environmental Standards

Effluent

PESTICIDE INDUSTRY

S.No.	Parameter	Concentration not to exceed, mg/l (except pH)
(i)	Compulsory	
	pH	6.5-8.5
	BOD (3 days at 27oC)	100
	Oil & grease	10
	Suspended solids	100
	Bioassay test	Minimum 90% survival of fish after 96 hrs with 90% effluent and 10% dilution water. Test should be carried out as per IS:6502? 1971
(ii)	Additional (a) Heavy Metal	
	Copper	1.0
	Manganese	1.0
	Zinc	1.0
	Mercury	0.01
	Tin	.1
	Any other like nickel	shall not exceed 5 times the drinking water standards (BIS) individually
	(b) Organics	
	Phenol & Phenolic compounds as C6H5OH	1.0
	(c) Inorganics	
	Arsenic as As	0.2
	Cyanide as CN	0.2
	Nitrate as NO3	50
	Phosphate as P	5.0
	(d) Specific pesticide	(microgram/litre)
	Benzene hexachloride	10
	DDT	10
	Dimethoate	450

		Copper oxychloride	9,600
		Ziram	1,000
		2.4D	400
		Paraquat	23,000
		Propanil	7,300
		Nitrofen	780
		Other (below mentioned pesticides individually)	100
Other Pesticides			
(i) Insecticides:			
		Aluminium phosphide	Lindane
		Dichlorovos	Malathion
		EDTC Mixer	Methyl bromide
		Ethylene dibromide	Nicotine sulphate
		Ethion	Oxydemeton methyl
		Fenitrothion	Methyl parathion
		Lime-sulphur	Phosphamidon
		Temephos	
(ii) Fungicides:			
		Aureofungin	Organomercurials (MENC & PMA)
		Barium polysulphide	Sulphur (Colloidal, Wettable & Dust)
		Cuprous oxide	Streptocycline
		Ferbam	Thiram
		Mancozeb	Zineb
		Manab	Carbendzim
		Nickel chloride	Tridemorph
(iii) Rodenticides:			
		Comafuryl	
		Warfarin	
		Zinc phosphide	
(iv) Nematicides:			
		Metham N-sodium	
(v) Weedicides:			
		Fluchloralin	
		Isoproturon	
		Butachlor	
		Anilphos	

	(vi) Weedicides:	
	Fluchloralin	
	Butachlor	
	Anilphos	
	(vi) Plant Growth Regulants:	
	Chloromequat chloride	
	Nemphalene acetic acid	
	(vii) Any other pesticide not specific above.	

Note :

1. Limits should be complied with at the end of the treatment plant before any dilution.
2. From the additional parameters specified in 49 (ii), only the relevant parameters (based on the raw materials used and products manufactured) shall be prescribed by the concerned State Board on a case-to- case basis.
3. No limit for COD is prescribed. If the COD in a treated effluent is persistently more than 250 mg/l, such industrial units are required to identify the chemicals causing the same. In case these are found to be toxic as defined in Schedule?I of the Hazardous Chemicals Rules, 1989, the State Board in such cases shall direct the industries to instal tertiary treatment, stipulating time limit. Otherwise COD may not be stipulated. This may be done on a case-to-case basis.
4. Solar evaporation followed by incineration is a recognised practice, provided the guidelines of solar evaporation as given below are followed.

Guidelines on solar evaporation system for wastewater from pesticides industry

1. Solar evaporation pans shall be constructed in such a way that the bottom is atleast one meter above the ground level.
2. Solar evaporation pans shall be leak proof and of impervious construction and designed as per

9. Facilities should have protective enclosure to keep wildlife, domestic animals, unauthorised persons, etc. away.

**Source : EPA Notification
[GSR 176(E) April 2, 1996]**