



B-23012/1/PCI-III/

8180

To

Shri D.Raja  
IITM Research Park, Phase-1,  
10th Floor, No.1, Kanagam Village,  
Behind Tidel Park, Taramani,  
Chennai-600 113

**Subject: Request for information on pollutants released from distillery under the Right to Information (RTI) Act 2005.**

Sir,

The following information is hereby provided:

The continuous wastewater generation streams from distilleries are spent wash, spentlees, yeast sludge washing and yeast sludge. However, spent wash is considered as the major polluting effluent stream from distilleries. Typical characteristics of spent wash and their generation potential from distilleries are annexed at Annexure – I. The Wastewater discharge standard for fermentation & distillation industries under the Environment (Protection) Rules 1986 is annexed at Annexure –II.

As per the charter on Corporate Responsibility for Environmental Protection (CREP) programme, distilleries are required to utilise spent wash by complying with the prescribed measures to achieve zero discharge of spent wash in inland surface water courses. Copy of relevant protocol under CREP is enclosed.

This is for your information, please.

Yours faithfully,

(A.B. Akolkar)  
Director & I/c PCI-III Division

Encl: As Above

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Annexure - I

Typical characteristics of distillery spent wash:-

S.No.	Parameter	Batch process	Continuous	Biostill Process
1.	Volume, L/L alcohol	14-15	10-12	7-9
2.	Color	Dark brown	Dark brown	Dark brown
3.	Ph	3.7-4.5	4.0-4.3	4.0-4.2
4.	COD	80,000-100000	110000-130000	140000-160000
5.	BOD	45000-50000	55000-65000	60000-70000
6.	Total	90000-120000	130000-160000	160000-210000
7.	Total Volatile	60000-70000	60000-75000	80000-90000
8.	Inorganic dissolved	30000-40000	35000-45000	60000-90000
9.	Chlorides	5000-6000	6000-75000	100000-120000
10.	Total Nitrogen	1000-12000	1000-1400	2000-2500
11.	Potassium	8000-12000	10000-14000	20000-22000
12.	Phosphorous	200-300	300-500	1600-2000
13.	Sodium	400-600	1400-1500	1200-1500
14.	Calcium	2000-3500	4500-6000	5000-6500

27/3/11



## Annexure-II

**Wastewater discharge standards for fermentation & distillation industry under the Environment (Protection) Rules 1986:**

S.No.	Parameter	Standard(Concentration not to exceed mg/lit except for pH and colour & odour)
1.	pH	5.5-9.0
2.	Colour and odour	All efforts should be made to remove colour and unpleasant odour as far as practicable
3.	Suspended solids	100
4.	BOD (3 days at 270C]	
	Disposal in to inland surface water or river streams	30
	Disposal on land or for irrigation	100

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9/3/2014

Liter per liter of alcohol

Type of Fermentation Process (a)	Molasses dilution fresh water (b)	Fresh Non-process water (RS Production)			Polluted Streams for recycle		Unpolluted streams for recycle (g)	Total streams for recycle (h)	Total water requirement (b+c+d-h)	Wastewater Generation		
		Cooling tower make-up (c)	Other non-process* (d)	For process (e)	For non-process (f)	Spent wash (i)				Spent lees (j)	Others (k)	
Batch	7.4-10.5	1.4-4.0	6.0-8.8	0.5-0.6	0.5-0.6	0.5-1.0	1.5-2.2	13.3-21.1	11.1-15.0	0.5-1.0	0.2-0.4	
Cascade Continuous	7.7-9.2	3.0-4.0	5.5-6.5	0.5-1.5	0.5-0.6	0.5-1.0	1.5-3.0	14.7-16.7	8.5-11.0	0.5-1.5	0.2-0.4	
Biostil Continuous	4.0-5.0	3.0-4.0	5.0-6.0	2.0-4.0	0.5-0.6	0.5-1.0	3.0-5.6	9.0-9.4	6.0-8.0	0.5-1.5	0.2-0.4	

\* Other than cooling tower

*Handwritten signature and date: 12/2/5/6*

**5.0 DISTILLERIES****1. Existing Molasses – Based Distilleries**

Noncompliant distilleries will furnish bank guarantee\* and Action Plan to concerned State Boards to ensure compliance with any or combination of the following measures:

- I. Compost making with press mud/agricultural residue / Municipal Waste;
- II. Concentration and drying / Incineration;
- III. Treatment of spentwash through biomethanation followed by two stage secondary treatment and dilution of the treated effluent with process water for irrigation as per norms prescribed by CPCB / MoEF;
- IV. Treatment of spentwash through bio-methanation following by secondary treatment (BOD < 2500 mg / l) for controlled discharge into sea through a proper submerged marine outfall at a point permitted by SPCB / CPCB in consultation with National Institute of Oceanography (NIO), so that Dissolved Oxygen in the mixing zone does not deplete, less than 4.0 mg/l;
- V. For taking decision on feasibility of one time controlled land application of treated effluent, a study will be undertaken within three months.

**The road map for utilization of spentwash by the distilleries to achieve zero discharge of spentwash in inland surface water courses will be as below:**

50% utilization of spentwash	— By March, 2004
75% utilization of spentwash	— By March, 2005
100% utilization of spentwash	— By December, 2005

**Till 100% utilization of spentwash is achieved, controlled and restricted discharge of treated effluent from lined lagoons during rainy season will be allowed by SPCB/CPCB in such a way that the perceptible colouring of river water bodies does not occur.**

## **Monitoring**

Task Force consisting of CPCB, SPCB, Experts and industry shall be constituted for monitoring the implementation of action points.

### **2. New Distilleries & Expansion of Existing Distilleries (Mollasses based)**

Proposal for Standalone new distilleries and expansion of existing distilleries without achieving zero discharge in surface water / ground water will not be considered by MoEF / SPCB.

\* To be decided by SPCBs/CPCB/MoEF.