Control of Microcystins Mass contents

Type of test	Control
Date	
Name of the water	Kasilwa Dam
Place	Kasilwa, Pune
Type of water	Dam water
Sampling Point	Kasilwa Dam
Sampling Date	
Name of the Analyst	Prof. Dr. Ashok Vaishampayan, Dr. Kiran Kumbhar, Mr. Ashwini Kumbhar
Name of the Organization	Department of Botany, Fergusson College, Pune
Methodology used	Microcystins LR, LW, LF, YR, YM, RR, RW, Nodularin by HPLC-PDA

Methodology

	Parameter	Yes/No	Method	Method No.	Method Ref.
1	Sampling as per Standard Methods for the examination of water and wastewater	Yes			
2	Sample preservation as per Standard Methods for the examination of water and wastewater	Yes			
3	Sample Pre-Treatment Step	Yes			
4	Sample Pre-Concentration Step	Yes			
5	Sample Extraction Step	Yes			
6	Sample Clean-up Step	Yes			
7	Sample Analysis Step	Yes			
8	Calibration Curve Preparation	Yes			
9	Calculation of Microcystins Mass contents as per Step 1 Method	Yes			
10	Calculation of Microcystins Mass contents as per Step 2 Method	Yes			
11	Calculation of Microcystins Mass contents as per Step 3 Method	Yes			
12	Calculation of Microcystins Mass contents as per Step 4 Method	Yes			

Table 1 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sampling Date
1	Kasilwa Dam	
2	Kasilwa Dam, 10 m upstream	
3	Kasilwa Dam, 10 m downstream	
4	Kasilwa Dam, 100 m upstream	
5	Kasilwa Dam, 100 m downstream	

Table 2 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sample Volume (ml)	Sample Preservation	Sample Pre-Treatment	Sample Pre-Concentration	Sample Extraction	Sample Clean-up	Sample Analysis	Calibration Curve Preparation	Calculation of Microcystins Mass contents as per Step 1 Method	Calculation of Microcystins Mass contents as per Step 2 Method	Calculation of Microcystins Mass contents as per Step 3 Method	Calculation of Microcystins Mass contents as per Step 4 Method
1	Kasilwa Dam	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Kasilwa Dam, 10 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Kasilwa Dam, 10 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Kasilwa Dam, 100 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Kasilwa Dam, 100 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 3 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sample Volume (ml)	Sample Preservation	Sample Pre-Treatment	Sample Pre-Concentration	Sample Extraction	Sample Clean-up	Sample Analysis	Calibration Curve Preparation	Calculation of Microcystins Mass contents as per Step 1 Method	Calculation of Microcystins Mass contents as per Step 2 Method	Calculation of Microcystins Mass contents as per Step 3 Method	Calculation of Microcystins Mass contents as per Step 4 Method
1	Kasilwa Dam	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Kasilwa Dam, 10 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Kasilwa Dam, 10 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Kasilwa Dam, 100 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Kasilwa Dam, 100 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 4 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sample Volume (ml)	Sample Preservation	Sample Pre-Treatment	Sample Pre-Concentration	Sample Extraction	Sample Clean-up	Sample Analysis	Calibration Curve Preparation	Calculation of Microcystins Mass contents as per Step 1 Method	Calculation of Microcystins Mass contents as per Step 2 Method	Calculation of Microcystins Mass contents as per Step 3 Method	Calculation of Microcystins Mass contents as per Step 4 Method
1	Kasilwa Dam	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Kasilwa Dam, 10 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Kasilwa Dam, 10 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Kasilwa Dam, 100 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Kasilwa Dam, 100 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 5 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sample Volume (ml)	Sample Preservation	Sample Pre-Treatment	Sample Pre-Concentration	Sample Extraction	Sample Clean-up	Sample Analysis	Calibration Curve Preparation	Calculation of Microcystins Mass contents as per Step 1 Method	Calculation of Microcystins Mass contents as per Step 2 Method	Calculation of Microcystins Mass contents as per Step 3 Method	Calculation of Microcystins Mass contents as per Step 4 Method
1	Kasilwa Dam	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Kasilwa Dam, 10 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Kasilwa Dam, 10 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Kasilwa Dam, 100 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Kasilwa Dam, 100 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6 : Microcystins Mass Sampling Point and Sampling Date

Point Code	Sampling Point Name	Sample Volume (ml)	Sample Preservation	Sample Pre-Treatment	Sample Pre-Concentration	Sample Extraction	Sample Clean-up	Sample Analysis	Calibration Curve Preparation	Calculation of Microcystins Mass contents as per Step 1 Method	Calculation of Microcystins Mass contents as per Step 2 Method	Calculation of Microcystins Mass contents as per Step 3 Method	Calculation of Microcystins Mass contents as per Step 4 Method
1	Kasilwa Dam	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Kasilwa Dam, 10 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Kasilwa Dam, 10 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Kasilwa Dam, 100 m upstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Kasilwa Dam, 100 m downstream	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Cold Water Fish, Landmark Pondi

Sample Code	Kasilwa Dam, Kasilwa Dam, Kasilwa Dam,