Cannabis Control Commission
COMMONWEALTH OF MASSACHUSETTS

Protocol for Sampling and Analysis of Environmental Media for Massachusetts Marijuana Establishments, Medical Marijuana Treatment Centers, and Colocated Marijuana Operations

Exhibit 5. Analysis Details – Water

Revised March 11, 2021

This document is issued by the Cannabis Control Commission. The applicable Marijuana laws, which include M.G.L. c. 94I, 94G, 935 CMR 500.000 and 935 CMR 501.000, should be reviewed as they may provide or clarify the legal requirements related to this document. This protocol document should be checked periodically for revisions. Questions with regards to this document may be directed to Commission@CCCMass.com.

Method	Analytical Method	Analyte	CAS	Reporting Limit (mg/L)	Acceptable Limits (mg/kg)
Metals	Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) comparable to SW-846 6010C or other suitable validated method or ICP-Mass Spectrometry (ICP-MS) comparable to SW-846 6020B or other suitable validated method and Cold Vapor Atomic Absorption (CVAA) for Mercury comparable to SW-846 7470A or other suitable validated method	Antimony	7440-36-0	0.060	6
		Arsenic	7440-38-2	0.010	10
		Cadmium	7440-43-9	0.005	5
		Chromium (Hexavalent)	7440-47-3	0.010	100
		Copper	7440-50-8	0.025	1,300
		Lead	7439-92-1	0.010	15
		Nickel	7440-02-0	0.040	100*
		Mercury (CVAA)	7439-97-6	0.0002	2
		gamma-BHC	58-89-9	0.00005	0.2
		Heptachlor	76-44-8	0.00005	0.4

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Method	Analytical Method	Analyte	CAS	Reporting Limit (mg/L)	Acceptable Limits (mg/kg)
Metals	Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) comparable to SW-846 6010C or other suitable validated method or ICP-Mass Spectrometry (ICP-MS) comparable to SW-846 6020B or other suitable validated method and Cold Vapor Atomic Absorption (CVAA) for Mercury comparable to SW-846 7470A or other suitable validated method	Heptachlor epoxide	1024-57-3	0.00005	0.2
		Endrin	72-20-8	0.0001	2
		Methoxychlor	72-43-5	0.0005	40
		Endrin ketone	53494-70-5	0.0001	2
		Endrin aldehyde	7421-93-4	0.0001	2
		alpha-Chlordane	5103-71-9	0.00005	2
		gamma-Chlordane	5103-74-2	0.00005	2

Method	Analytical Method	Analyte	CAS	Reporting Limit (mg/L)	Acceptable Limits (mg/kg)
Microbiological	Pour Plate Method comparable to SM 9215B or other suitable validated method	Heterotrophic Plate Count	NA	1.0	MMCL
	Membrane Filter comparable to SM 9222D or other suitable validated method	Fecal Coliform	NA	1.0	MMCL
	Multi-tube comparable to SM 9221F or other suitable validated method	e. Coli	NA	1.0	MMCL

**For contaminant limits in water requiring testing, as described earlier in this protocol, the Massachusetts Department of Public Health used Massachusetts Maximum Contaminant Levels (MMCLs) as acceptable limits. For one metal (nickel) no MMCL exists, thus the Massachusetts Department of Environmental Protection Office of Research and Standards Goal (ORSG) for nickel in drinking water of 100 mg/L was used as an acceptable limit.*

Please note that these Protocols are continually evaluated and revised based upon new scientific and industry information.