2020年10月至2021年9月之食水水質

Drinking Water Quality for the Period of October 2020 - September 2021

- 香港特別行政區政府於2021年4月22日公布了最新的香港食水標準。最新的香港食水標準水質參數由原有的92個修訂至60個。當中包括加入「高氯酸鹽」和「總三鹵甲烷」兩個新參數，以及剔除34個不相關的參數。本報告羅列該60個香港食水標準水質參數的監測數據。

  新加入的參數是按世界衞生組織的最新準則而訂立。而被剔除的參數在水務署的恆常水質監測中一直低於可檢測水平，顯示它們在香港食水中含量極微，甚或不存在，遠低於會對健康造成風險的水平。

  市民可參閱水務署網頁(https://www.wsd.gov.hk/tc/core-businesses/water-quality/my-drinking-water-quality/hong-kong-drinking-water-standards/index.html)了解香港食水標準的最新資訊。

  The Government of the Hong Kong Special Administrative Region promulgated on 22 April 2021 the latest Hong Kong Drinking Water Standards ("HKDWS"). The number of water quality parameters in the latest HKDWS is revised from 92 to 60, which includes the addition of 2 new parameters, namely perchlorate and total trihalomethanes, and the exclusion of 34 irrelevant parameters. This report lists the monitoring data for those 60 HKDWS water quality parameters.

  The newly added parameters have been established in accordance with the latest World Health Organization's Guidelines. As for the excluded parameters, they have all along been undetectable under the routine water quality monitoring programme of the WSD, indicating that their levels were negligible, if not nil, in the drinking water of Hong Kong, which were far below a level that would cause adverse health risk.

  The public may visit the WSD website (https://www.wsd.gov.hk/en/core-businesses/water-quality/my-drinking-water-quality/hong-kong-drinking-water-standards/index.html) for updated information on HKDWS.

- 政府亦訂立了食水感官準則，以確保食水的外觀、味道和氣味等感官質量。

  The Government has also established the Aesthetic Guidelines ("AG") in ensuring the aesthetic quality, such as the taste and odour, of the drinking water in Hong Kong.

- 所有食水樣本是從濾水廠、配水庫、食水缸、供水接駁點及公眾可達的用戶水龍頭抽取。

  Drinking water samples were taken at water treatment works, service reservoirs, fresh water tanks, connection points and publicly accessible consumer taps.

甲、香港食水標準
Part A. Hong Kong Drinking Water Standards

參數 Parameter	單位 Unit	監測結果(註釋 1) Monitoring Data(Note 1) (10/2020 - 09/2021)			香港食水標準 HKDWS	達標(註釋 2) Compliance(Note 2)
		最低值 Minimum	最高值 Maximum	平均值 Average		
艾氏劑和狄氏劑 Aldrin & dieldrin	微克／公升 µg/L	< 0.008	< 0.008	< 0.008	≤ 0.03	✓
銻 Antimony	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	≤ 0.02	✓
砷 Arsenic	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	≤ 0.01	✓
鋇 Barium	毫克／公升 mg/L	0.003	0.028	0.015	≤ 1.3	✓
苯 Benzene	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	≤ 10	✓
苯并[a]芘 Benzo[a]pyrene	微克／公升 µg/L	< 0.002	< 0.002	< 0.002	≤ 0.7	✓
硼 Boron	毫克／公升 mg/L	< 0.02	0.08	0.04	≤ 2.4	✓

參數 Parameter	單位 Unit	監測結果(註釋 1) Monitoring Data(Note 1) (10/2020 - 09/2021)			香港 食水標準 HKDWS	達標(註釋 2) Compliance(Note 2)
		最低值 Minimum	最高值 Maximum	平均值 Average		
溴酸鹽 Bromate	微克／公升 µg/L	< 1	1.3	< 1	≤ 10	✓
一溴二氯甲烷 Bromodichloromethane	微克／公升 µg/L	< 15	21	< 15	≤ 60	✓
溴仿 Bromoform	微克／公升 µg/L	< 25	< 25	< 25	≤ 100	✓
鎘 Cadmium	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	≤ 0.003	✓
四氯化碳 Carbon tetrachloride	微克／公升 µg/L	< 0.5	< 0.5	< 0.5	≤ 4	✓
氯酸鹽 Chlorate	微克／公升 µg/L	< 10	150	40	≤ 300	✓
氯丹 Chlordane	微克／公升 µg/L	< 0.05	< 0.05	< 0.05	≤ 0.2	✓
氯 Chlorine	毫克／公升 mg/L	< 0.1	1.7	0.7	≤ 5	✓
亞氯酸鹽 Chlorite	微克／公升 µg/L	< 10	< 10	< 10	≤ 700	✓
氯仿 Chloroform	微克／公升 µg/L	< 50	< 50	< 50	≤ 300	✓
鉻 Chromium	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	≤ 0.05	✓
銅 Copper	毫克／公升 mg/L	< 0.003	0.051	< 0.003	≤ 2	✓
二(2-乙基己基)鄰苯二甲酸鹽 Di(2-ethylhexyl)phthalate	微克／公升 µg/L	< 2	< 2	< 2	≤ 8	✓
二溴乙腈 Dibromoacetonitrile	微克／公升 µg/L	< 0.5	0.97	< 0.5	≤ 70	✓
二溴一氯甲烷 Dibromochloromethane	微克／公升 µg/L	< 25	< 25	< 25	≤ 100	✓
1,2-二溴-3-氯丙烷 1,2-Dibromo-3-chloropropane	微克／公升 µg/L	< 0.25	< 0.25	< 0.25	≤ 1	✓
1,2-二溴乙烷 1,2-Dibromoethane	微克／公升 µg/L	< 0.1	< 0.1	< 0.1	≤ 0.4	✓
二氯乙酸鹽 Dichloroacetate	微克／公升 µg/L	< 2	17	6.7	≤ 40	✓
二氯乙腈 Dichloroacetonitrile	微克／公升 µg/L	< 2.5	3.3	< 2.5	≤ 20	✓
1,4-二氯苯 1,4-Dichlorobenzene	微克／公升 µg/L	< 75	< 75	< 75	≤ 300	✓
1,2-二氯乙烷 1,2-Dichloroethane	微克／公升 µg/L	< 7.5	< 7.5	< 7.5	≤ 30	✓
二氯甲烷 Dichloromethane	微克／公升 µg/L	< 5	< 5	< 5	≤ 20	✓
1,4-二噁烷 1,4-Dioxane	微克／公升 µg/L	< 1.5	2.2	< 1.5	≤ 50	✓
異狄氏劑 Endrin	微克／公升 µg/L	< 0.15	< 0.15	< 0.15	≤ 0.6	✓
乙苯 Ethylbenzene	微克／公升 µg/L	< 75	< 75	< 75	≤ 300	✓

參數 Parameter	單位 Unit	監測結果(註釋 1) Monitoring Data(Note 1) (10/2020 - 09/2021)			香港 食水標準 HKDWS	達標(註釋 2) Compliance(Note 2)
		最低值 Minimum	最高值 Maximum	平均值 Average		
氟化物 Fluoride	毫克／公升 mg/L	< 0.1	0.64	0.49	≤ 1.5	✓
六氯丁二烯 Hexachlorobutadiene	微克／公升 µg/L	< 0.15	< 0.15	< 0.15	≤ 0.6	✓
鉛 Lead	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	≤ 0.01	✓
林丹 Lindane	微克／公升 µg/L	< 0.5	< 0.5	< 0.5	≤ 2	✓
汞 Mercury	毫克／公升 mg/L	< 0.00005	< 0.00005	< 0.00005	≤ 0.006	✓
甲氧毒草安 Metolachlor	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	≤ 10	✓
微囊藻毒素-LR Microcystin-LR	微克／公升 µg/L	< 0.5	< 0.5	< 0.5	≤ 1	✓
禾草特 Molinate	微克／公升 µg/L	< 1.5	< 1.5	< 1.5	≤ 6	✓
一氯乙酸鹽 Monochloroacetate	微克／公升 µg/L	< 2	< 2	< 2	≤ 20	✓
鎳 Nickel	毫克／公升 mg/L	< 0.001	0.006	0.002	≤ 0.07	✓
硝酸鹽 (以 NO_3^- 計) Nitrate (as NO_3^-)	毫克／公升 mg/L	< 2.5	17	4.7	≤ 50	✓
亞硝酸鹽 (以 NO_2^- 計) Nitrite (as NO_2^-)	毫克／公升 mg/L	< 0.004	0.015	< 0.004	≤ 3	✓
N-亞硝基二甲胺 *N*-Nitrosodimethylamine	微克／公升 µg/L	< 0.025	< 0.025	< 0.025	≤ 0.1	✓
高氯酸鹽 Perchlorate	微克／公升 µg/L	< 1	4.3	1.2	≤ 70	✓
硒 Selenium	毫克／公升 mg/L	< 0.003	< 0.003	< 0.003	≤ 0.04	✓
西瑪三嗪 Simazine	微克／公升 µg/L	< 0.5	< 0.5	< 0.5	≤ 2	✓
苯乙烯 Styrene	微克／公升 µg/L	< 5	< 5	< 5	≤ 20	✓
特丁津 Terbuthylazine	微克／公升 µg/L	< 1.8	< 1.8	< 1.8	≤ 7	✓
四氯乙烯 Tetrachloroethene	微克／公升 µg/L	< 10	< 10	< 10	≤ 40	✓
甲苯 Toluene	微克／公升 µg/L	< 175	< 175	< 175	≤ 700	✓
總三鹵甲烷 Total trihalomethanes	比率總和(註釋 3) sum ratio(Note 3)	0	0.56	0.22	比率總和 ≤ 1 sum ratio ≤ 1	✓
三氯乙酸鹽 Trichloroacetate	微克／公升 µg/L	< 2	15	4.9	≤ 200	✓
氟樂靈 Trifluralin	微克／公升 µg/L	< 5	< 5	< 5	≤ 20	✓
鈾 Uranium	毫克／公升 mg/L	< 0.0002	0.001	< 0.0002	≤ 0.03	✓
二甲苯 Xylenes	微克／公升 µg/L	< 125	< 125	< 125	≤ 500	✓

參數 Parameter	單位 Unit	監測結果(註釋 1) Monitoring Data(Note 1) (10/2020 - 09/2021)			香港 食水標準 HKDWS	達標(註釋 2) Compliance(Note 2)
		最低值 Minimum	最高值 Maximum	平均值 Average		
總 α 活度 Gross alpha (α) activity	貝可/公升 Bq/L	< 0.1	< 0.1	< 0.1	≤ 0.5	✓
總 β 活度 Gross beta (β) activity	貝可/公升 Bq/L	< 0.2	0.2	< 0.2	≤ 1.0	✓
埃希氏大腸桿菌 *Escherichia coli*	菌落數/100毫升 cfu/100mL	0	1	0	0	註釋 4 Note 4

註釋:

Notes:

(1) 以上的統計數字並不包括水務署於2017年12月展開的水質監測優化計劃（優化監測計劃）所收集的數據。優化監測計劃監測數據的統計每周於水務署網頁(www.wsd.gov.hk/tc/dwsewqmp)內公布。

The above statistics do not include the data collected under the Enhanced Water Quality Monitoring Programme (Enhanced Programme) launched by the WSD since December 2017. The statistics of the monitoring data of the Enhanced Programme are published on the WSD's website (www.wsd.gov.hk/en/dwsewqmp) on a weekly basis.

(2) "✓"表示這時段內抽取的食水樣本的食水水質均完全符合香港食水標準。

"✓" indicates full compliance of drinking water quality with the HKDWS in all water samples taken during this period.

(3) 總三鹵甲烷的比率總和不得超出 1，其計算方式如下:

$$\frac{\text{溴仿含量}}{\text{其香港食水標準值}}+\frac{\text{一溴二氯甲烷含量}}{\text{其香港食水標準值}}+\frac{\text{二溴一氯甲烷含量}}{\text{其香港食水標準值}}+\frac{\text{氯仿含量}}{\text{其香港食水標準值}}$$

Sum ratio of total trihalomethanes should not exceed 1, as calculated by:

$$\frac{\text{bromoform}}{\text{its HKDWS}}+\frac{\text{bromodichloromethane}}{\text{its HKDWS}}+\frac{\text{dibromochloromethane}}{\text{its HKDWS}}+\frac{\text{chloroform}}{\text{its HKDWS}}$$

(4) 於2021年9月尾在恆常水質監測期間中發現一個不達標的樣本。水務署已即時採取了適當的跟進行動並提供臨時食水。於10月6日完成清洗供水系統並從該系統的水樣本確認不含埃希氏大腸桿菌，水質符合香港食水標準，適合安全飲用。這時段內，埃希氏大腸桿菌的達標率為99.996%。

One non-compliant sample was found in late September 2021 during the routine monitoring of drinking water quality. Appropriate follow-up actions were taken immediately and temporary water supply was provided. On 6 October 2021 cleaning work of the supply system was completed and test results of water samples collected from the system confirmed no presence of *Escherichia coli*. The water quality is in compliance with the HKDWS and safe for consumption. The compliance rate of *Escherichia coli* during this period is 99.996%.

乙、 感官準則

Part B. Aesthetic Guidelines

參數 Parameter	單位 Unit	監測結果(註釋 1) Monitoring Data(Note 1) (10/2020 - 09/2021)			準則值 Guideline Value	達標(註釋 2) Compliance(Note 2)
		最低值 Minimum	最高值 Maximum	平均值 Average		
鋁 Aluminium	毫克／公升 mg/L	< 0.01	0.14	0.03	≤ 0.2	✓
色度 Colour	Hazen	< 5	< 5	< 5	≤ 15	✓
鐵 Iron	毫克／公升 mg/L	< 0.01	0.27	< 0.01	≤ 0.3	✓
錳 Manganese	毫克／公升 mg/L	< 0.01	0.03	< 0.01	≤ 0.1	✓
2-甲基異莰醇 2-Methyl-isoborneol (MIB)	納克／公升 ng/L	< 5	41	8.5	≤ 50	✓
氣味 Odour	--	無異味 Unobjectionable			無異味 Unobjectionable	✓
酸鹼值 (水溫25℃時) pH at 25 ℃	--	7.0	9.6	8.3	6.5 - 9.5	註釋 3 Note 3
味道 Taste	--	無異味 Unobjectionable			無異味 Unobjectionable	✓
混濁度 Turbidity	NTU	< 0.1	6.8	0.2	≤ 3	註釋 4 Note 4
鋅 Zinc	毫克／公升 mg/L	< 0.01	0.09	< 0.01	≤ 1.5	✓

<u>註釋:</u>

<u>Notes:</u>

(1) 以上參數是有關香港食水的感官質量。水質超過感官準則值一般不會導致健康問題，但可能會導致較差的感官質量。

The above parameters relate to the aesthetic quality of drinking water in Hong Kong. The exceedance of which could cause objectionable aesthetic effects but will not cause health concerns in general.

(2) "✓"表示這時段內抽取的食水樣本的食水水質均完全符合感官準則。

"✓" indicates full compliance of drinking water quality with the AG in all water samples taken during this period.

(3) 於2020年12月8日，在恆常水質監測期間的一個食水樣本錄得酸鹼值為9.6。水務署已即時採取了適當的跟進行動。同日稍後時間抽取的食水樣本確認相關供水系統的酸鹼值已恢復正常並符合感官準則。這時段內，酸鹼值的達標率為99.992%。

pH 9.6 was found in a drinking water sample collected on 8 December 2020 during the routine monitoring of drinking water quality. Appropriate follow-up actions were taken immediately. Water sample collected later on the same day confirmed that pH value of the relevant water supply system resumed normal and was in compliance with the AG. The compliance rate of pH during this period is 99.992%.

(4) 於2021年5月4日和11日，在恆常水質監測期間的兩個食水樣本錄得混濁度分別為6.8NTU及3.5NTU。水務署已即時採取了適當的跟進行動。2021年5月5日和12日所抽取的食水樣本確認相關供水系統的混濁度已恢復正常並符合感官準則。這時段內，混濁度的達標率為99.994%。

Turbidities of 6.8 NTU and 3.5 NTU were found in two drinking water samples collected on 4 and 11 May 2021, respectively, during the routine monitoring of the drinking water quality. Appropriate follow-up actions were taken immediately. Water samples collected on 5 and 12 May 2021 confirmed that turbidity levels of the relevant water supply systems resumed normal and were in compliance with the AG. The compliance rate of turbidity during this period is 99.994%.

丙、 香港食水的一般特性

Part C. General Properties of the Drinking Water in Hong Kong

參數 Parameter	單位 Unit	監測結果(註釋1) Monitoring Data(Note 1) (10/2020 - 09/2021)		
		最低值 Minimum	最高值 Maximum	平均值 Average
導電率 (水溫25℃時) Conductivity at 25 ℃	μS/cm	62	335	186
溫度 Temperature	℃	13.0	33.5	25.3
總鹼度 (以 $CaCO_3$ 計) Total alkalinity (as $CaCO_3$)	毫克／公升 mg/L	7	75	30
總硬度 (以 $CaCO_3$ 計) Total hardness (as $CaCO_3$)	毫克／公升 mg/L	< 5	86	44
鈣 Calcium	毫克／公升 mg/L	0.8	27	15
鎂 Magnesium	毫克／公升 mg/L	0.3	2.8	1.7
氯化物 Chloride	毫克／公升 mg/L	6	27	13
硫酸鹽 Sulphate	毫克／公升 mg/L	4	40	18
正磷酸鹽 (以 PO_4 計) Ortho-phosphates (as PO_4)	毫克／公升 mg/L	< 0.01	0.03	< 0.01
二氧化硅 (以 SiO_2 計) Silica (as SiO_2)	毫克／公升 mg/L	1.1	18	9.5

註釋:

Note:

(1) 以上項目是有關香港食水的一般物理和化學特性。香港食水標準及感官準則並不包括這些項目，因此沒有以上項目的標準值或準則值。

The above parameters relate to the general physical and chemical properties of the drinking water in Hong Kong. The HKDWS and AG do not include these parameters and hence there are no standard values or guideline values for them.