

香港的食水處理及水質控制

Water Treatment and Quality Control in Hong Kong



水務署

Water Supplies Department

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水質事務諮詢委員會

水質事務諮詢委員會於二〇〇〇年四月一日成立，是一個由公眾人士及政府代表組成的獨立組織，旨在推動公眾參與監察本港供水水質和提高有關方面的透明度，同時希望能夠收集各界人士的寶貴意見及建議，以收集思廣益之效。組織成員有學者、區議員、環保人士、專業人士及有關政府部門和決策局的官員，極具代表性。他們的職權範圍包括檢討供水水質事宜，並透過水務署署長給香港特別行政區政府提供意見。詳情可瀏覽水務署網頁。

Advisory Committee on the Quality of Water Supplies

The Advisory Committee on the Quality of Water Supplies, founded on 1st April 2000, is an independent body aiming at promoting transparency and encouraging public participation in the monitoring of the quality of water supplies in Hong Kong. It comprises members of the public including academics, district councillors, green advocates, professionals, and officials from related government departments and bureaus. Their responsibilities are to review and to advise the Government of the Hong Kong Special Administrative Region through the Director of Water Supplies on matters relating to the quality of water supplies. For details, please visit the WSD's website.

食水水質監察和控制

香港是世界上可享用最安全食水的地區之一。香港的食水在送往用戶之前均需經過嚴格的品質控制及適當的處理，水質不論在化學成份及細菌含量方面均符合世界衛生組織（世衛）所建議的食水水質指引。水務署的職責便是為市民供應清澈、衛生而不含病原細菌的食水。



整個供水系統的食水均經徹底過濾，而水務署水質科學部的專業化驗師更不斷進行物理、化學、細菌學、生物學和輻射學等化驗，監察水質。

水務署分別從集水區進水口、接收東江水的抽水站、水塘、濾水廠、配水庫、食水分配系統和用戶的水龍頭處抽取多個水樣本進行化驗，從而有系統地監察整個濾水、供水及分配系統的水質。在二零零二至二零三年期間經水務署抽取及化驗的水樣本超逾17萬個。

由於本港的食水都經過適當的處理，而且在水質監察和控制方面相當嚴格，因此所供應的食水保證安全衛生，而且符合世衛標準。

Drinking Water Quality

Hong Kong enjoys one of the safest water supplies in the world. With proper treatment and stringent quality monitoring and control, the quality of the treated water conforms both chemically and bacteriologically to the Guidelines for Drinking-water Quality recommended by the World Health Organization (WHO). Water Supplies Department is committed to supplying the public with water that is clear, wholesome and free from pathogenic bacteria.

The treatment process and the water quality throughout the supply system is continuously monitored by professionally qualified chemists under the Water Science Division of Water Supplies Department through a series of physical, chemical, bacteriological, biological and radiological examinations.

Samples are regularly taken at catchment intakes, the pumping station receiving Guangdong water, storage reservoirs, water treatment works, service reservoirs, distribution systems and consumers' taps. More than 170 000 water samples were taken and tested in 2002/03 by the Water Supplies Department.

With proper treatment and stringent quality monitoring and control, Hong Kong is assured of a safe and wholesome water supply which meets WHO standards.

濾水處理過程

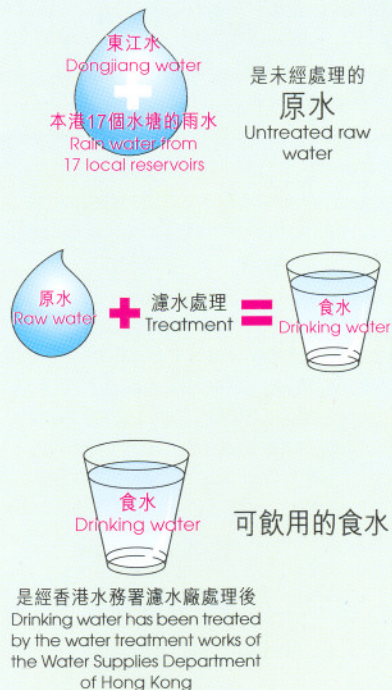
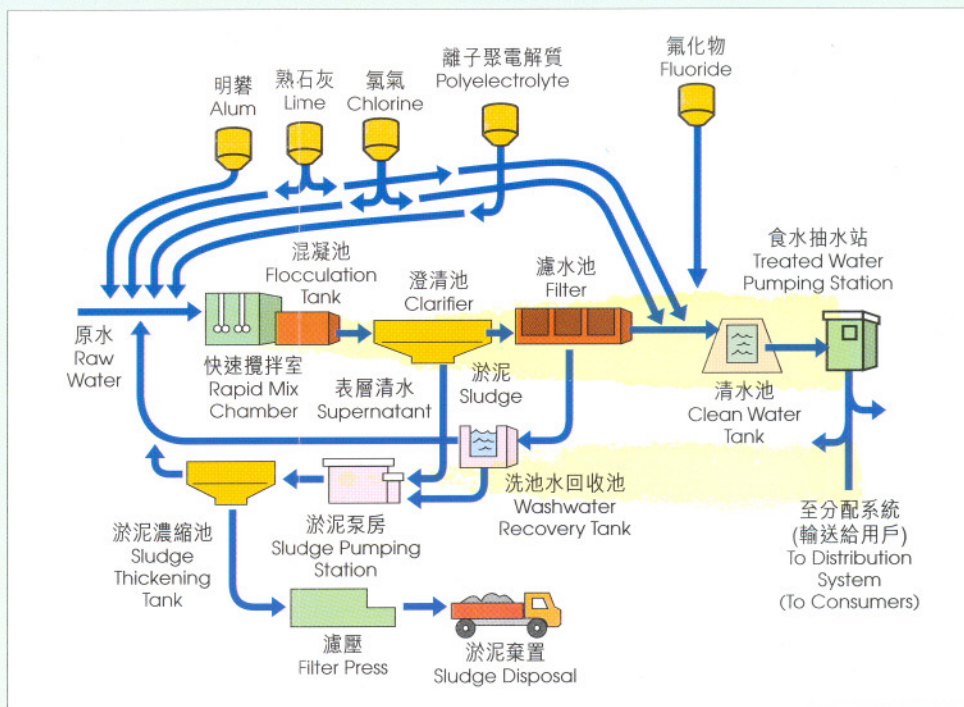
香港的食水有兩大來源：從本港集水區收集所得的雨水以及來自中國廣東省的東江水。由原水變為食水必須經過一連串的處理過程，確保經處理的水完全符合國際間所定的食水標準，方可飲用。香港現時共有21座濾水廠，每日可處理480萬立方米食水。

在濾水過程中，原水(即未經處理的水)會先與化學品混和，然後流入澄清池凝聚和沉澱，再流進濾水池，利用砂及無煙煤進行過濾。

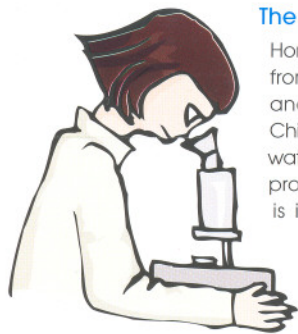
過濾後的水會在接觸池內加入氯氣和熟石灰，進行消毒及調節酸鹼度，並加入氟化物，保護牙齒。為避免食水在送往用戶途中滋生細菌，仍然會保留微量的氯氣在水中。經處理後的食水會輸送到接駁至用戶的供水系統，或儲存於配水庫，供應市民飲用。



濾水過程 The Water Treatment Process



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The Water Treatment Process

Hong Kong's water comes from two sources: from rainfall collected in local catchments and from the Dongjiang in Guangdong, China. For the raw water to become drinking water, it has to undergo a series of treatment processes to ensure that the treated water is in full compliance with international quality standards for drinking water.

There are now 21 water treatment works in Hong Kong with a total output capacity of 4.8 million cubic metres per day.

In the water treatment process, raw water (untreated water) is mixed with chemicals and passes to the clarifiers where coagulation and flocculation of the impurities in the water will take place. Clarified water then flows into filters of sand and anthracite for removal of the more finely divided suspensions.

The filtered water passes into contact tanks where chlorine and lime are added to disinfect it and to control the alkalinity of the final treated water. Fluoride is also added to minimise the risk of dental decay. A small amount of residual chlorine is maintained in the water to keep it free from bacteria on its journey to the consumers. The treated water is pumped into a system of water mains, stored in service reservoirs and then supplied to the public.

輸港的東江原水

根據香港特區政府與廣東省當局簽訂的供水合約，輸往香港的東江水必須符合中國環保局地面水的規定，以確保東江水經本港的濾水廠處理後絕對適宜飲用。廣東省當局近年亦推行以下措施，致力保護輸港的原水水質：

- 於輸水河道沿岸設立污水處理廠，污水先經處理後才排放入輸水河道。
- 立例禁止輸水河道附近設立一些具污染性的工廠，原設於該處的這類工廠，大部份亦已被遷走。
- 將東江水的取水口上移至水質較佳的地方。
- 深圳的生物硝化處理廠已於1999年初啟用，大大改善了輸往本港的東江水水質。
- 一條由東江水取水口至深圳水庫的密封式輸水管道，已於2003年6月28日全面啟用。



東江水由東江的抽水站經密封管道來到深圳，與污染源分隔，因此市民可以解除東江水受污染的心理壓力。個別商業機構為其產品的商業利益，時常通過不同渠道大肆渲染東江水問題影響香港食水的水質，與事實不符。

水務署在本港接收東江水的木湖抽水站內設立水質分析系統，24小時進行監察，時時刻刻確保水質符合標準，市民不用擔心。

有關東江水的水質資料，可瀏覽本署網頁。

Dongjiang raw water transferred to Hong Kong

According to the agreement reached between HKSAR Government and Guangdong Authorities, the Dongjiang water should conform to the environmental quality standards of surface water set by the Chinese Authorities. The raw water after purification by Hong Kong's water treatment works is suitable for drinking. Guangdong Authorities have carried out the following measures in recent years so as to assure the quality of Dongjiang raw water transferred to Hong Kong:

- Sewage treatment plants have been built along the riverside of Dongjiang to treat sewage before discharging into the river.
- Factories which may pollute Dongjiang have been moved out and forbidden to be set up near the riverside through enactment of legislation.
- Intake of Dongjiang water has been moved upstream where the water quality is better.
- With the commissioning of the Biological Nitrification Plant in Shenzhen in early 1999, the quality of Dongjiang water has greatly improved.
- The closed aqueduct between the Dongjiang intake and Shenzhen Reservoir has been in full commission since 28 June 2003.

Water supplied to Hong Kong is delivered through the closed aqueduct, separated from the source of pollution. Hence the public's worry about the pollution of Dongjiang water can be removed.

In fact, for the sake of their products' interest, some commercial concerns often exaggerate via the media that our water quality has been threatened by heavily-polluted Dongjiang water. This is not the case.

With the system for analyzing Dongjiang water received at the Muk Wu Pumping Stations, WSD monitors the water quality round the clock to ensure compliance with the quality standards. There is nothing to worry about.

For quality data about the Dongjiang water, please refer to the WSD's website.



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