



澳門特別行政區政府
Governo da Região Administrativa Especial de Macau

衛生局
Serviços de Saúde

(Translation)

PROGRAMME OF DENGUE BLOOD TESTS REFERRED BY PRIVATE CLINICS

Purposes: By provide dengue testing for private clinics, strengthen the Health Bureau's capability in early detection and control of infectious diseases.

Field of Testing: Dengue fever (including serological test and PCR method).

Conditions and Manners for Submission of Samples:

- ◆ The Public Health Laboratory (LSP) does not charge any fee for the test, private clinics should inform patients that the test is carried out by LSP free of charge;
- ◆ Doctors of private clinics should duly complete the "REQUEST FORM FOR DENGUE TESTING" (see Annex) and collect samples according to the requirement of LSP;
- ◆ Private clinics should, whenever possible, provide epidemiological data and contact information of relevant patients.
- ◆ Private clinics may either directly submit specimens to LSP, or submit through private laboratories.

Distribution of Materials

LSP shall distribute sampling containers and request forms to submitting private clinics. Provision of supplementary materials shall depend on the situation of sample submission.

Procedures for Submission of Samples

- ◆ Complete the test request form
 - Information of patient: Name, patient card/ID no., age, and contact phone number.
 - Clinical information: Onset date of fever and rash, travel history, etc.
 - Information of requesting clinic: name of clinic, name of doctor and contact phone number.
- ◆ Collection of blood sample: draw 5ml of intravenous blood into a blood collection tube without anticoagulant
- ◆ Transportation and storage of samples
 - Blood samples should be delivered to LSP on the same day. Specimens should be delivered as early as possible; if same day delivery is not possible, keep specimens refrigerated at temperature between 2~8°C (note: the storage time and environment may affect the result of PCR testing)
 - Avoid specimen leakage and spillage: Place specimen tube vertically or put it in a sampling bag
- ◆ Time for submission of samples
 - Working days: 09:00~12:30; 14:30~17:00

Issuance of Report

- ◆ Clinics will be notified to obtain the specimen result 2 days after completion of analysis (in cases with negative IgM results, it may take 1-2 days to process the analysis; for IgM positive cases, the length of processing time depends).



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Notification

- ◆ Private clinics should report positive cases of infectious disease to the CDC

Annex I: PROCEDURES FOR APPLYING FOR DENGUE TESTING TO PUBLIC HEALTH
LABORATORY (LSP)

Annex II: INDICATIONS OF DENGUE FEVER AND TIME OF SAMPLE SUBMISSION

Annex III: SEROLOGICAL FEATURES OF DENGUE FEVER

Annex IV: REQUEST FORM FOR DENGUE TESTING - PROGRAMME OF DENGUE BLOOD TESTS
REFERRED BY PRIVATE CLINICS

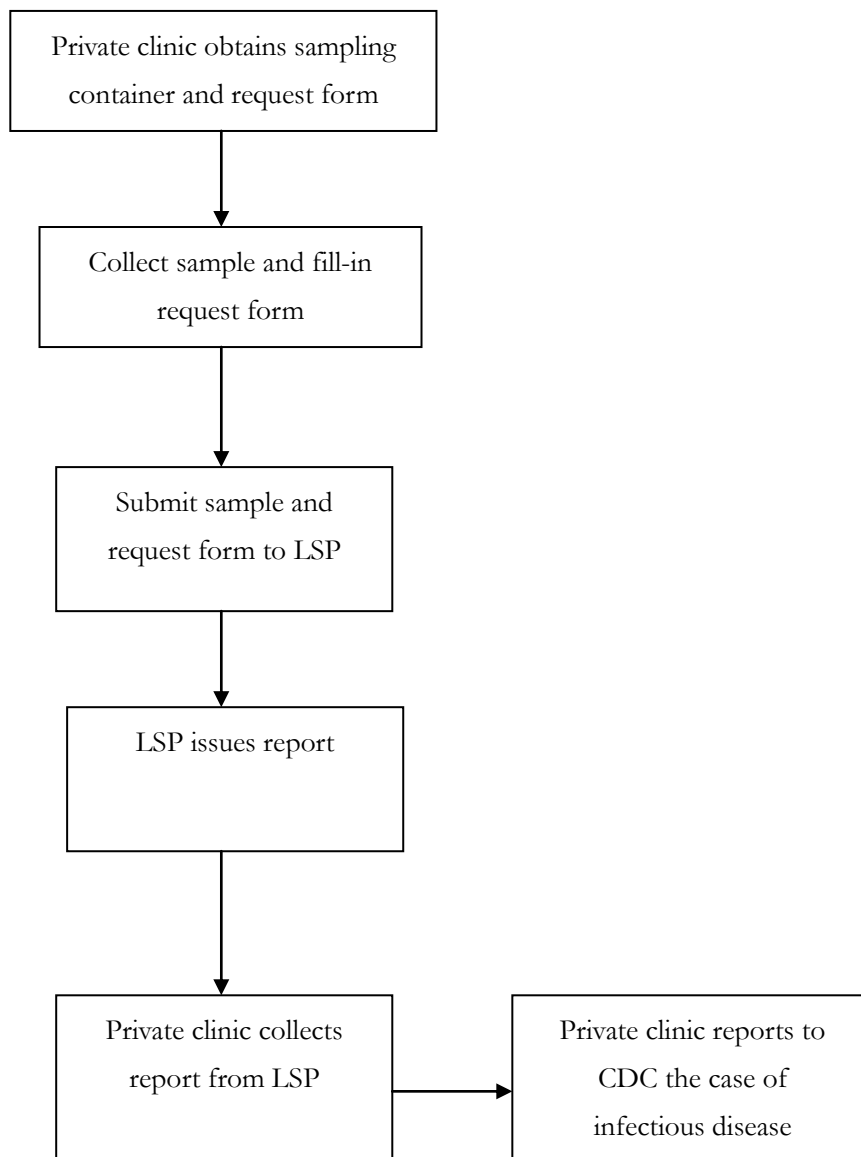


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Annex I

PROCEDURES FOR APPLYING FOR DENGUE TESTING
TO PUBLIC HEALTH LABORATORY (LSP)





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Annex II

INDICATIONS OF DENGUE FEVER AND TIME OF SAMPLE SUBMISSION

- ✓ **Common Clinical Features of Dengue Fever** include fever, headache, pain behind the eyes, muscle pain, skin rash, low white cell count, manifestation of bleeding tendency/decrease in the number of platelets in the blood, etc. Rash commonly appears as fever resolves; bleeding manifestation and reduction in platelets count are apparent symptoms of which not all infected people will develop, especially at the early stage of the infection.
- ✓ In principle, physicians may apply for laboratory tests for suspected cases with clinical features compatible with dengue fever, based on the following criteria:

During Non-Epidemic Period:

- Patients without travelling to dengue-epidemic region in the past 14 days: present with fever, severe headache, back eye socket pain, muscle pain, rash, low white cell count or bleeding tendency which cannot be explained by other diseases
- Patients who have been to dengue-epidemic region in the past 14 days: suspected cases of dengue with fever

During Epidemic Period:

Febrile patients can be diagnosed as cases of dengue

Diagnostic Tests Practised at Public Health Laboratory

PCR: it is used to detect the presence of viruses in the specimen; PCR analysis tends to yield more positive results during the febrile phase of illness, it is less sensitive after the fever subsides

Serology: it is used to test for the presence of anti-dengue IgG and IgM antibodies; please refer to the following paragraphs for details of serological features.

Timing of Specimen Collection

- Patients suspected of having dengue should undertake serological test at once. If a medical facility fails to arrange serological tests for patients, they should refer patients to take the test in other capable facility, such as a hospital.
- IgG and IgM antibodies should be tested at the same time.
- If the first serological test is performed during the first 5 days of symptoms, the patient should return for follow-up visit after 7 days of illness and a second sample may be required.



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Annex III

SEROLOGICAL FEATURES OF DENGUE FEVER

- The percentage of IgM-positive change in primary infection: when patient exhibits fever, the average positive rate is 50%; on day 5, the positive rate is about 80%. On day 10 of exhibiting fever or 2-3 days after the body temperature returns to normal, the positive rate can reach 97 – 100%. It will reach a peak on day 14 and will maintain at that level for the next 3 months.
- The percentage of IgG-positive change in primary infection: will appear slightly later compared with IgM, with a similar change to IgM. However, it maintains a shorter period of time at its lowest level (within 3 months).
- The percentage of IgM-positive change in secondary infection: similar to the primary infection although the concentration is relatively low.
- The percentage of IgG-positive change in secondary infection: will rapidly grow with high concentration over a long period. It can remain between 3 and 6 months or even longer.
- After being infected with Flaviviridae natural virus (such as Japanese Encephalitis or Yellow Fever) or re-infected with dengue fever after vaccination, similar onset of symptoms may appear.



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Annex IV

登革熱病毒檢測專用化驗申請表 - 非政府診所送檢樣本計劃

**REQUEST FORM FOR DENGUE TESTING -
PROGRAMME OF DENGUE BLOOD TESTS
REFERRED BY PRIVATE CLINICS**

公共衛生化驗所編號
LSP no.

送檢日期
Submission Date

病人資料 Information of Patient	臨床資料 Clinical Information
姓名 Name:	發熱開始日期 Date of fever onset (yy/mm/dd) ____/____/____
出生日期 Date of birth (yy/mm/dd) ____/____/____	出疹開始日期 Data of rash onset (yy/mm/dd) ____/____/____
性別 <input type="checkbox"/> 男(M) <input type="checkbox"/> 女(F) Sex :	其它症狀和體徵 Other signs or symptoms
身份証或衛生局醫療卡號碼 ID / Patient Card no.	14 日內曾前往旅遊的地區及 Place(s) visited in the past 14 days _____
聯絡電話 Tel :	返澳日期 Return date ____/____/____
地址 Address :	

樣品資料 Information of Sample	送檢機構 Requesting Clinic
樣本種類 <input type="checkbox"/> 血液(Blood) <input type="checkbox"/> 血清(Serum) Sample type	送檢機構名稱 Name of Clinic
採樣日期 Collection date (yy/mm/dd) ____/____/____	醫生姓名/簽名 Name / Signature of doctor
採樣時間 Collection time (hh:mm) ____:____	聯絡電話 Tel.
	私人化驗所名稱 Name of private laboratory
	私人化驗所聯絡電話 Tel. of private laboratory

血清檢驗項目 Serological Test
登革熱病毒檢測 Detection of dengue viruses (檢驗需要 5 ml 不含抗凝劑血樣) (5ml blood sample without anticoagulant is required)