

NATIONAL STANDARD METHOD

INVESTIGATION OF VIRAL ENCEPHALITIS

VSOP 43

Issued by Standards Unit, Department for Evaluations, Standards & Training
Centre for Infections



UK Clinical Virology Network

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 1 of 7
Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

STATUS OF NATIONAL STANDARD METHODS

National Standard Methods, which include standard operating procedures (SOPs), algorithms and guidance notes, promote high quality practices and help to assure the comparability of diagnostic information obtained in different laboratories. This in turn facilitates standardisation of surveillance underpinned by research, development and audit and promotes public health and patient confidence in their healthcare services. The methods are well referenced and represent a good minimum standard for clinical and public health microbiology. However, in using National Standard Methods, laboratories should take account of local requirements and may need to undertake additional investigations. The methods also provide a reference point for method development.

National Standard Methods are developed, reviewed and updated through an open and wide consultation process where the views of all participants are considered and the resulting documents reflect the majority agreement of contributors.

Representatives of several professional organisations, including those whose logos appear on the front cover, are members of the working groups which develop National Standard Methods. Inclusion of an organisation's logo on the front cover implies support for the objectives and process of preparing standard methods. The representatives participate in the development of the National Standard Methods but their views are not necessarily those of the entire organisation of which they are a member. The current list of participating organisations can be obtained by emailing standards@hpa.org.uk.

The performance of standard methods depends on the quality of reagents, equipment, commercial and in-house test procedures. Laboratories should ensure that these have been validated and shown to be fit for purpose. Internal and external quality assurance procedures should also be in place.

Whereas every care has been taken in the preparation of this publication, the Health Protection Agency or any supporting organisation cannot be responsible for the accuracy of any statement or representation made or the consequences arising from the use of or alteration to any information contained in it. These procedures are intended solely as a general resource for practising professionals in the field, operating in the UK, and specialist advice should be obtained where necessary. If you make any changes to this publication, it must be made clear where changes have been made to the original document. The Health Protection Agency (HPA) should at all times be acknowledged.

The HPA is an independent organisation dedicated to protecting people's health. It brings together the expertise formerly in a number of official organisations. More information about the HPA can be found at www.hpa.org.uk.

The HPA aims to be a fully Caldicott compliant organisation. It seeks to take every possible precaution to prevent unauthorised disclosure of patient details and to ensure that patient-related records are kept under secure conditions¹.

More details can be found on the website at www.evaluations-standards.org.uk. Contributions to the development of the documents can be made by contacting standards@hpa.org.uk.

The reader is informed that all taxonomy in this document was correct at time of issue.

Please note the references are now formatted using Reference Manager software. If you alter or delete text without Reference Manager installed on your computer, the references will not be updated automatically.

Suggested citation for this document:

Health Protection Agency (2009). *Investigation of Viral Encephalitis*. National Standard Method VSOP 43 Issue 2. http://www.hpa-standardmethods.org.uk/pdf_sops.asp.

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 2 of 7
Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

INDEX

STATUS OF NATIONAL STANDARD METHODS 2
INDEX..... 3
AMENDMENT PROCEDURE 4
INVESTIGATION OF VIRAL ENCEPHALITIS 5
ACKNOWLEDGEMENTS AND CONTACTS 6
REFERENCES 7

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 3 of 7
Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

AMENDMENT PROCEDURE

Controlled document reference	VSOP 43
Controlled document title	Investigation of Viral Encephalitis

Each National Standard Method has an individual record of amendments. The current amendments are listed on this page. The amendment history is available from standards@hpa.org.uk.

On issue of revised or new pages each controlled document should be updated by the copyholder in the laboratory.

Amendment Number/ Date	Issue no. Discarded	Insert Issue no.	Page	Section(s) involved	Amendment
1/ 11.12.09	1	2	1	Front Page	SMF logo added

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 4 of 7
Reference no: VSOP 43i2

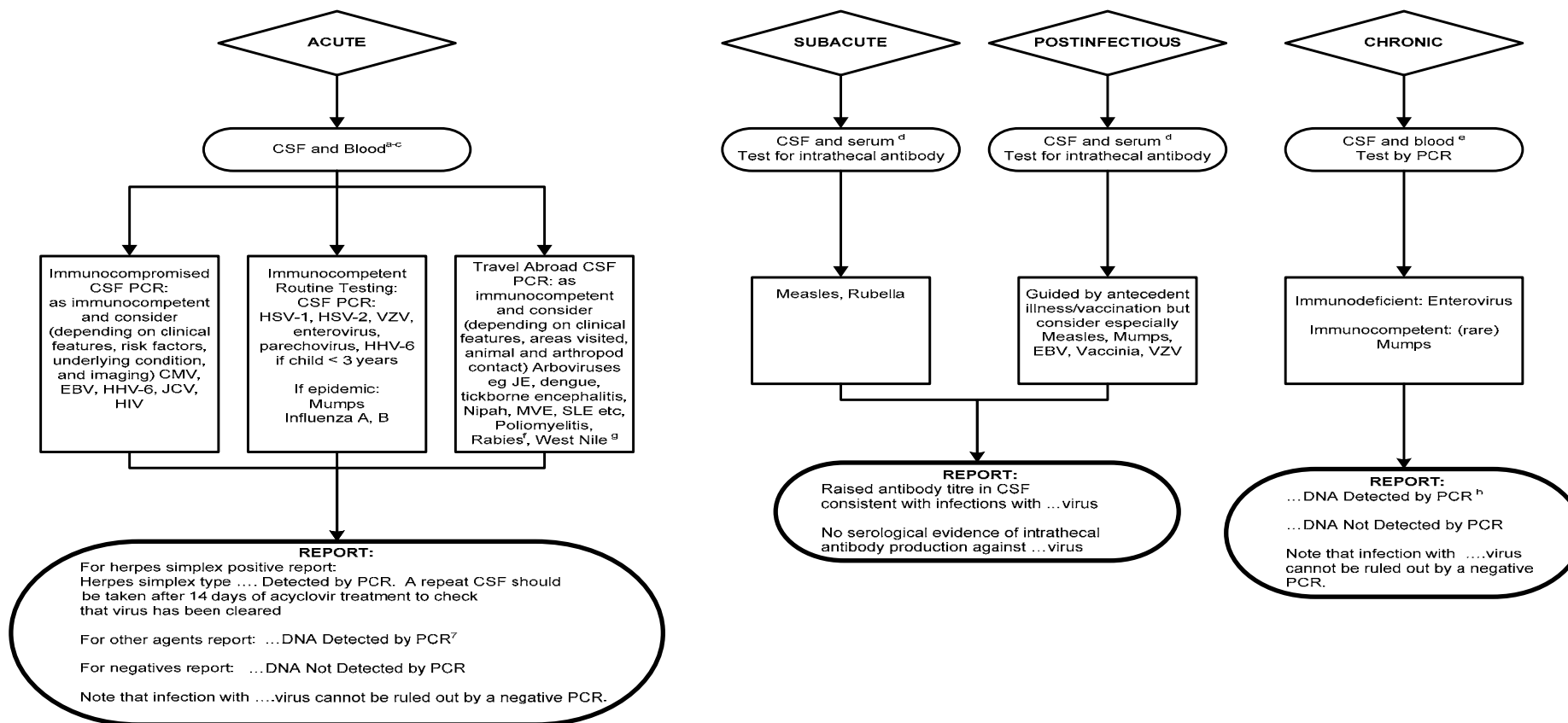
This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

INVESTIGATION OF VIRAL ENCEPHALITIS

Refer to [QSOP 48 – Investigation of viral encephalitis and meningitis](#) for further information. This algorithm assumes that, when clinically indicated, appropriate investigations will also be carried out by culture, antigen detection, and PCR to exclude bacterial pathogens such as meningococci, pneumococci, *Listeria* etc, Fungal pathogens such as *Cryptococcus* and *Aspergillus*, and parasitic infections such as Toxoplasmosis, Prion diseases may also need to be considered.



INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 5 of 7

Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

Notes:

- a. EDTA anticoagulated blood for PCR, especially in testing for neonatal herpes simplex infection
- b. Refer to [QSOP 48 – Investigation of viral encephalitis and meningitis](#) for appropriate diagnostic methods other than PCR and intrathecal antibody production. For example rabies diagnosis might employ serum antibody testing, and immunofluorescent antibody staining of skin biopsy in addition to the above, while some arbovirus infections are diagnosed by IgM tests on CSF
- c. Additional specimens may support a diagnosis without being diagnostic eg faeces virus culture in enterovirus infection, HIV PCR positivity in blood in HIV seroconversion illness, low avidity HHV-6 IgG and positive HHV-6 IgM in serum in a young child
- d. Paired CSF and serum samples are required for the detection of specific intrathecal antibody production.
- e. Clotted blood can be used for enterovirus and parechovirus PCR
- f. Consider rabies in areas designated by WHO as 'rabies-free', including UK, if contact with a bat
- g. Infections such as West Nile fever may be part of routine testing for surveillance purposes in some non-endemic countries eg UK
- h. Report positive findings to relevant Public Health and surveillance authorities eg SCIEH, CFI

ACKNOWLEDGEMENTS AND CONTACTS

This National Standard Method has been developed, reviewed and revised by the National Standard Methods Working Group for Clinical Virology (http://www.hpa-standardmethods.org.uk/wg_virology.asp). The contributions of many individuals in clinical virology laboratories and specialist organisations who have provided information and comment during the development of this document, and final editing by the Medical Editor are acknowledged.

The National Standard Methods are issued by Standards Unit, Department for Evaluations, Standards & Training, Centre for Infections, Health Protection Agency, London.

For further information please contact us at:

Standards Unit
Department for Evaluations, Standards & Training
Centre for Infections
Health Protection Agency
Colindale
London
NW9 5EQ

E-mail: standards@hpa.org.uk

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 6 of 7

Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk

REFERENCES

1. Department of Health NHS Executive: The Caldicott Committee. Report on the review of patient-identifiable information. London. December 1997.

INVESTIGATION OF VIRAL ENCEPHALITIS

Issue no: 2 Issue date: 11.12.09 Issued by: Standards Unit, Department for Evaluations, Standards and Training Page 7 of 7

Reference no: VSOP 43i2

This NSM should be used in conjunction with the series of NSMs from the Health Protection Agency

www.evaluations-standards.org.uk

Email: standards@hpa.org.uk