PUBLIC ASSESSMENT SUMMARY REPORT – Menactra®

What is Menactra®?

Menactra® is a vaccine with the following composition:

Ingredient	Concentration per 0.5 mL dose	Function
Meningococcal (serogroup A) Polysaccharide (monovalent	4 µg (polysaccharide)	Active Ingredient
Meningococcal (serogroup C) Polysaccharide (monovalent	4 µg (polysaccharide)	Active Ingredient
Meningococcal (serogroup Y) Polysaccharide (monovalent	4 µg (polysaccharide)	Active Ingredient
Meningococcal (serogroup W135) Polysaccharide (monovalent	4 µg (polysaccharide)	Active Ingredient
Diphtheria Toxoid Protein	48 µg[1]	Carrier protein for all serogroup polysaccharide
Sodium Phosphate	0.7 mg	Excipient (for pH)
Sodium Chloride	4.35 mg	Excipient (Tonicity)

[1] Protein content is approximate and dependent on the conjugate polysaccharide to protein ratio

The vial is a Type 1 USP Borosilicate Glass, symmetrically formed clear glass serum tubing vial (37mm in length; 16.75mm diameter) of 3 mL capacity; a 12.7 mm rubber stopper and a 13.3 mm flip-off seal.

A VVM type 7 is incorporated into the label of the vaccine.

What is Menactra® used for?

Menactra® Meningococcal Conjugate Vaccine, is indicated for active immunization for the prevention of invasive meningococcal disease caused by *Neisseria meningitidis* serogroups A, C, Y, and W-135. Menactra® vaccine is approved for use in persons 9 months to 55 years of age.

How is Menactra® used?

For recipients aged 2-55 years, primary immunization with Menactra® vaccine consists of a single 0.5 mL dose administered intramuscularly. For recipients aged 9-23 months, primary immunization with Menactra® vaccine consists of two 0.5 mL doses administered intramuscularly, at least 3 months apart.

Concomitant immunisation was tested by the manufacturer with : [in adults:] Typhim Vi® (Typhoid Vi Polysaccharide Vaccine) ; [in 11-17 year olds:] Tetanus and Diphtheria Toxoids Adsorbed, For Adult Use (Td); and [in < 2 year olds:] PCV7, MMR, varicella, MMRV, HepA, Hib vaccines. Concomitant administration did not result in any clinical impact on efficacy. Furthermore, the WHO Position paper on Meningococcal vaccines http://www.who.int/wer/2011/wer8647.pdf states that : *In general, meningococcal vaccines can be administered simultaneously with other vaccines, provided separate sites of injection are used.* The WHO clinical evaluator considered that no additional clinical studies aimed at assessing the co-administration with other EPI vaccines were necessary.

What are the vaccine characteristics?

Menactra® must be stored at 2-8°C. Under these recommended storage conditions, the vaccine is stable for 24 months after the date of manufacture.

The cold chain volume per dose in the secondary carton is 20.50 cc [for the 5 x 1 dose carton] and 54.88 cc [for the 1 x 1 dose carton]. According to the guidelines for Assessing the Programmatic Suitability of Vaccine Candidates for WHO Prequalification , smaller packed volumes are a preferred characteristic. The cold chain volume per dose in the single dose cartons is relatively high and could present storage problems for countries with limited cold chain capacity. However, the cold chain volume per dose was not considered to prevent prequalification on programmatic grounds.

Who is the regulatory authority responsible for its oversight vis a vis WHO?

Menactra® was licensed in the USA, its country of manufacture, by the USA FDA on 4 January 2005. US FDA/CBER is the authority responsible for the continuing oversight of this WHO prequalified vaccine.

How has Menactra® been studied from the clinical point of view?

Sanofi Pasteur has based the Menactra® claim of efficacy on the basis of non-inferiority to Menomune® (the quadrivalent polysaccharide meningococcal vaccine from the same manufacturer) in immunogenicity comparsions. The primary measure of immune response was the proportion of participants achieving a four-fold or greater increase in serum bactericidal antibody, to serogroups A, C, Y, and W135. Functional antibody was measured with a bactericidal assay using baby rabbit complement (SBA-BR). Safety

comparisons between of Menactra and Menomune were also included in a number of clinical trials supporting licensure of Menactra. To date, the timing of Menactra revaccination has not been determined. No additional clinical studies in the target population of United Nations agencies recipient countries or aimed at assessing the co-administration with other EPI vaccines were considered necessary.

Other information about evaluation of Menactra® :

The vaccine was accepted for review under the streamlined procedure as described in the Prequalification Procedure. Evaluation was based on the NRA quality and clinical reviews provided. In addition, WHO specific requirements were evaluated. There is no specific TRS covering quadravalent meningococcal conjugated vaccine. There is a TRS for MenA conjugate vaccine http://who.int/biologicals/publications/trs/areas/vaccines/meningococcal/WHO_TRS_924_MeningA2_102-128.pdf and MenC conjugate vaccine http://who.int/biologicals/publications/trs/areas/vaccines/meningococcal/Annex%203%20(90-94)TRS926meningC2003.pdf
The vaccine meets the requirements of these TRSs and W135 and Y conjugate production and testing is analogous.

On the basis of review of the NRA's GMP inspection reports of the manufacturing sites, a site audit by WHO as part of the prequalification process was waived.

This summary was last updated on 14 March, 2014 and published on 20 March, 2014