For use only of a Registered Medical Practitioner or Hospital or Laboratory

Japanese Encephalitis Vaccine Inactivated (Adsorbed, Human) IP

(Vero cell derived)

JENVAC®

1. NAME AND DESCRIPTION OF THE MEDICINAL PRODUCT:

JENVAC® is a suspension for injection presented in liquid formulation and is intended for human use, for prevention of disability and morbidity of Japanese Encephalitis. It is a liquid preparation, containing the JE virus strain (JEV strain-821564-XY) obtained from National Institute of Virology; Pune. It was isolated from a clinical case of JE infection from an endemic area in India. The strain was adapted to grow in vero cells. The vaccine is prepared by purification and inactivation process consistent with current good manufacturing practices. The vaccine fulfills WHO requirements for Purified Inactivated Japanese Encephalitis Vaccine

2. QUALITATIVE ANDQUANTITATIVE COMPOSITION:

Each dose of 0.5 mL contains:

Purified, Inactivated Japanese Encephalitis Virus Protein (JEV Strain 821564-XY) NLT 5.0 μg	
Aluminium (Al^{+++}) as Aluminium Hydroxide Gel	0.25 mg
Thiomersal IP (as Preservative)	0.025 mg
Phosphate Buffered Saline	q.s to 0.5 mL

3. PHARMACEUTICAL FORM:

Suspension for Injection.

4. CLINICAL PARTICULARS:

4.1 Therapeutic Indications:

JENVAC® is indicated for active immunization against Japanese Encephalitis infection in adults and children aged one year and above. It should be used in children and adults at risk of exposure through travel to JE endemic areas, spending a month or longer in endemic areas during the transmission season or the course of their occupation or residing in areas where JE is endemic or epidemic.

4.2 Posology and method of administration:

Mode and route of administration:

JENVAC® is administered intramuscularly into the deltoid region of upper arm for adults and anterolateral region of thigh for children. Do not administer intravenously, subcutaneously or intradermally.

4.3 Dosage & schedule:

The primary vaccination consists of a single dose of 0.5 mL. If the vaccine was administered more than 1 year ago, a booster dose may be given prior to potential re-exposure or visiting to endemic area.

It is recommended that the vaccines who received first dose of **JENVAC®** should receive their booster dose of vaccination with **JENVAC®**.

The vaccine has to be administered by a qualified healthcare professional. Shake the vaccine container well to obtain uniform suspension before administration.

4.4 Contraindications:

Vaccine must not be given to individuals with known or suspected hypersensitivity to the components of the vaccine.

Severe allergic reaction (e.g. anaphylaxis) after a previous dose of **JENVAC®** is a contraindication to administration of next (booster) dose.

Administration must be postponed in persons with fever or other conditions as deemed necessary by the administering physician.

4.5 Special warning/precaution:

- Do not administer intravenously, intradermally, or subcutaneously.
- Do not administer if particulate matter remains following shaking or if discoloration is observed.
- Like with all other vaccines, supervision and appropriate medical treatment should always be available for treatment of any anaphylactic reactions that may occur after immunization.
- **JENVAC®** will not protect against encephalitis caused by other micro-organisms.

4.6 Interaction with other medicinal products and other forms of interaction:

For concomitant administration of other injectable product, use different injection sites and separate syringes. **JENVAC®** should not be mixed with any other vaccine or medicinal product, because the interactions with other vaccines or medicinal products have not been established.

4.7 Pregnancy and lactation:

Safety and efficacy have not been established in pregnant women and in nursing mothers.
It is not known whether this vaccine is excreted in human milk.

4.8 Effect on ability to drive and use machines:

No studies on the effect of **JENVAC®** on the ability to drive and use machines have been performed.

4.9 Undesirable effects:

The safety of **JENVAC®** vaccine was established in controlled clinical trials in healthy volunteers in comparison with a licensed JE vaccine. General adverse events such as fever headache, body ache and local adverse events such as pain, redness and swelling at the injection site were the frequently reported adverse events after administration of **JENVAC®**. They usually occurred within first 48 hours after vaccination and dissipate within 2 days.
Within each system organ class, the adverse reactions are ranked under headings of frequency using the following convention:

Very common	: ≥10%
Common	: ≥1% and <10%
Uncommon	: ≥0.1% and <1%
Rare	: ≥0.01% and <0.1%
Very rare	: <0.01%

Using above convention, the reported adverse events were:

Very common	: Fever
Common	: Headache, Body ache, Pain, Swelling and Redness at injection site
Uncommon	: Nausea, Vomiting, Diarrhea, Cold, Cough, Myalgia

4.10 Overdose:

No case of overdose with **JENVAC®** has been reported.

5. PHARMACOLOGICAL PROPERTIES:

5.1 Pharmacodynamic properties:

Pharmaco-therapeutic group: Encephalitis vaccines, ATC code: J07BA02 Japanese Encephalitis is a disease caused by mosquito-bome JE virus. **JENVAC®** is a vero-cell based purified inactivated vaccine that is known to act by inducing antibodies that neutralize live JEV.

Clinical studies:

In a phase I study, the safety and immunogenicity of BBIL's **JENVAC®** vaccine was established in healthy adult volunteers and the development proceeded to phase II/III study.
The phase II/III, randomized, single blinded, active controlled study was conducted to evaluate the immunogenicity and safety of **JENVAC®** vs. Chinese SA14-14-2 (live attenuated JE vaccine) in healthy volunteers. In this study, proportion of subjects achieving sero-protection after a single dose of respective vaccine, was significantly higher in **JENVAC®** treatment arm (98.7%) compared to that in the SA-14-14-2 arm (77.6%), 28 days post vaccination. Similarly, a phase IV, open labeled, comparative, randomized, active controlled study was conducted to evaluate the immunogenicity and safety of a single dose of **JENVAC®** vs. SA-14-14-2 vaccine in healthy volunteers. While the proportion of subjects being sero-negative or sero-positive for JE antibodies was similar in both treatment groups at the baseline, proportion of subjects achieving sero-protection was significantly higher in the **JENVAC®** treatment arm (92.4%) compared to that in the SA-14-14-2 arm (71.4%), 4 weeks after vaccination. Further, the higher sero-protection rate was persistent till 1 year of follow up among the subjects receiving **JENVAC®** vaccine;81.7% vs 47.9% ($p = 0.0001$).

5.2 Pharmacokinetic properties:

Evaluation of pharmacokinetic properties is not required for vaccines.

5.3 Pre- Clinical safety data

Pre-clinical toxicology studies were carried out in lab animals where the vaccine did not elicit any toxic findings.

6. PHARMACEUTICAL PARTICULARS:

6.1 List of excipients:

1. Phosphate buffered saline
2. Aluminium (Al^{+++}) as Aluminium hydroxide gel
3. Thiomersal

6.2 Incompatibilities:

This medicinal product must not be mixed with other medicinal products.

6.3 Shelf life:

The Expiry date of the vaccine is indicated on the label and carton of the product.

6.4 Special precaution for storage:

Store at + 2° to + 8 °C, Do not freeze. Discard if frozen.
Shake well before use. Keep out of reach of children.
Do not use the vaccine after the expiration date as shown on the label.
Opened vial should be used within 48 hours when stored under refrigeration at + 2° to + 8°C. For multi dose vials, use different syringe at each time of vaccination.

7. Presentation:

JENVAC® is presented in USP type I glass vial
Single dose vial : 0.5 mL
Multi dose vial (5 doses) : 2.5 mL

Last Revision date: November 2016

Manufactured and Marketed by:

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