SUMMARY OF PRODUCT CHARACTERISTICS

Bivalent OPV (Type 1 & 3)

Live, Attenuated, Oral Poliomyelitis Vaccine Type 1 and Type 3 (Sabin)

1,000,000 C.C.I.D.$_{50}$ of Type 1 (Strain LS-c, 2ab)
600,000 C.C.I.D.$_{50}$ of Type 3 (Strain Leon 12 a$_1$b)

Oral suspension (drops)

Core Data Sheet

Version 1.1

NOTICE

The Novartis Vaccines Core Data Sheet (CDS) displays the company's current position on important characteristics of the product, including the Core Safety Information according to ICH E2C.

The Novartis Vaccines CDS contains all relevant information relating to indications, dosing, pharmacology and Core Safety Information which Novartis Vaccines requires to be listed for the product in all countries where the product is registered.

The Novartis Vaccines Core Safety Information (CSI) consists of Sections 5, 6, 7, 8, 9, 10, and 13 of the Core Data Sheet ("Contraindications", "Special Warnings an Precautions for Use, "Adverse Reactions, "Interactions" "Pregnancy and Breastfeeding", "Overdose", and "Non-Clinical Safety Data" respectively). All elements of the Core Safety Information must be included in all national labels. Any exceptions must be approved on a case-by-case basis by the Global Labelling Committee. The Core Safety Information (CSI) and the Development Core Safety Information is integrated in Sections 5, 6, 7, 8, 9, 10 and 13. When the DCSI and CSI are developed this template is used and sections which are not part of the CSI are left blank.

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GLC approval: *07 March 2011*
Release date: *29 March 2011*
Document status: *Final, version 1.1*
Number of pages: *15*

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PLEASE NOTE :

The following Core Product Information refers to a product that is indicated only for poliomyelitis Supplementary Immunisation Activities (SIAs) in children from birth to 5 years of age, to interrupt type 1 and 3 poliovirus transmission in remaining polio endemic areas. Therefore the information herewith contained follows only WHO recommendations for endemic countries.

1 Product name/ Trade name(s)

Bivalent OPV (type 1&3) Live, Attenuated, Oral Poliomyelitis Vaccine Type 1 and Type 3 (Sabin)

Strength: not less than 1,000,000 C.C.I.D.$_{50}$ of Type 1 (Strain LS-c, 2ab)
not less than 600,000 C.C.I.D.$_{50}$ of Type 3 (Strain Leon 12 a$_1$b)

Pharmaceutical form: Oral suspension (drops)

Note
TM/® symbols to be used in accordance with licensing country requirements

2 Qualitative and Quantitative Composition

Active substance(s)

Bivalent OPV (type 1&3) is a bivalent polio vaccine for oral use (bOPV) containing a suspension of type 1 and type 3 attenuated poliomyelitis viruses (Sabin strain) prepared in *Clorocebus aethiops* kidney tissue cultures.

Each 0.1 ml dose (2 drops) contains:
Active ingredients:
not less than 1,000,000 CCID$_{50}$ of Type 1 (Strain LS-c, 2 ab)
not less than 600,000 CCID$_{50}$ of Type 3 (Strain Leon 12 a$_1$b)

Excipients

Magnesium chloride	9.5 mg as stabilizer
Arginine	1.0 mg as stabilizer
Lactalbumin	not more than 0.25 mg
red phenol (pH indicator)*	
sodium chloride*	
potassium chloride*	
calcium chloride *	
Glucose*	
sodium phosphate*	
magnesium sulphate *	

potassium phosphate*	
sodium bicarbonate*	
Medium 199 *	
water for injections	up to 0.1 ml

*Note: *quantitative information for these excipients are not included since during formulation their amount depends on virus titer.*
Medium 199: culture medium

Adjuvants

N/A

Residues of special relevance

Traces of kanamycin and neomycin sulfate are present as residuals of the manufacturing process at quantities no greater than 5 micrograms/dose.

Appearance

The vaccine appears as a clear, coloured liquid.

3 Indications

Active immunisation against type 1 and type 3 polioviruses.

Bivalent OPV (type 1&3) is indicated for poliomyelitis Supplementary Immunisation Activities (SIAs) in children from birth to 5 years of age to interrupt type 1 and 3 poliovirus transmission in remaining polio endemic areas. The routine poliomyelitis vaccination programme should continue to use trivalent vaccines according to national policy.

4 Dosage and administration

General target population:

Children from birth to 5 years

Dosing in special populations:

Paediatric patients
One dose (0.1 ml) consists of two drops. Pay special attention to administering only two drops.

Immune deficiency*
Individuals infected with human immunodeficiency virus (HIV), both asymptomatic and symptomatic, may be immunised with Poliomyelitis Vaccine according to standard schedules.

**The product is only indicated for poliomyelitis Supplementary Immunisation Activities (SIAs) and distributed by UN Agencies according to the WHO*

Immunisation Schedule [(1)] *****
Bivalent OPV (type 1&3) is indicated for poliomyelitis Supplementary Immunisation Activities (SIAs) in children from birth to 5 years of age, to interrupt type 1 and 3 poliovirus transmission in remaining polio endemic areas.
The routine poliomyelitis vaccination programme should continue to use trivalent vaccines according to national policy.

[(1)] *Novartis Vaccines and Diagnostics S.r.l. supportive clinical data, on WHO E.P.I. recommended immunization schedule, are not available.*

The product is only indicated for poliomyelitis Supplementary Immunisation Activities (SIAs) and distributed by UN Agencies according to the WHO recommendations, for paragraph* **Immunisation Schedule *please use the above statement.*

Method of administration

Bivalent OPV (type 1&3) must be administered exclusively by the oral route.

Shake the dispenser well before using to ensure that the vaccine is totally thawed.

One dose (0.1 ml) consists of two drops– Pay special attention to administering two drops only.

Two drops are delivered directly into the mouth from the multidose dropper-dispenser. Care should be taken not to contaminate a multidose dropper-dispenser with saliva of the

vaccinee. For older children it may be preferable to avoid the possible bitter taste by placing the drops on a sugar lump or in syrup.

For proper use of Dropper-Dispenser please see Section 14: Pharmaceutical Information (Instructions for the Use and Handling of the Dropper-dispenser).

For information on appropriate in-use and storage conditions of opened multi dose vials, refer to section 14: Product Information (Special Precautions for Storage).

5 Contraindications

Hypersensitivity to any components of the vaccine.

Defer vaccination in case of acute febrile illness, diarrhoea or other intestinal disorders and during treatment with immunosuppressive drugs.

The onset of any neurologic reaction or hypersensitivity after vaccination is a contraindication to further doses of vaccine.

The use of Bivalent OPV (type 1&3) in subjects previously vaccinated with injectable inactivated poliomyelitis vaccines is not contraindicated.

Immune deficiency*
Individuals infected with human immunodeficiency virus (HIV), both asymptomatic and symptomatic, may be immunised with bOPV according to standard schedules.
However **the vaccine is contraindicated in those with primary immune deficiency disease or suppressed immune response** from medication, leukaemia, lymphoma or generalized malignancy.

**The product is only indicated for poliomyelitis Supplementary Immunisation Activities (SIAs) and distributed by UN Agencies according to the WHO*

Note: Text is bolded in WHO template for this vaccine, and does not represent an increased level of concern from NVD.

6 Warnings and precautions for use

Precautions
Ensure that the vaccine is completely thawed before use.

Care should be taken not to contaminate a multidose dropper-dispenser with saliva of the vaccinee.

Non-used or expired vaccine, dropper-dispensers and any spoon which may have been used during administration should be sterilized before discarding.

Warnings
Bivalent OPV (type 1&3) should not be used for routine immunisation.

Bivalent OPV (type 1&3) is for oral use only and it should under no circumstances be injected

In case of diarrhoea following immunisation, the dose received will not be counted as part of the immunization schedule and it should be repeated after recovery.
It is highly advisable to take all precautions of personal hygiene when coming into contact with vaccinated subjects.
The vaccine should be administered to breastfed infants, preferably two hours before or after breastfeeding in order to avoid contact with the antibodies present in the breast milk.

The vaccine contains red phenol as pH indicator. Variations in the color (pink, yellow, red) due to storage with dry ice do not affect the quality of the vaccine.

Driving and using machines
Not Applicable.

- **EU Class labelling statement for pediatric vaccines*:**

- The potential risk of apnoea and the need for respiratory monitoring for 48 to 72 hours should be considered when administering the primary immunisation series to very premature infants (born <28 weeks of gestation) and particularly for those with previous history of respiratory immaturity. As the benefit of vaccination is high in this group of infants, vaccination should not be withheld or delayed.

Note: *WHO decided not to have this information in the UNICEF and PAHO leaflet, also not required in the WHO Model Insert.

7 Adverse reactions

Adverse Reactions

No safety data are available for Bivalent OPV (type 1&3).

In the vast majority of cases there are no side effects reported with the trivalent OPV, that includes the same bOPV component.

Non-specific symptoms, as fever, vomiting, cephalea, diarrhoea, allergic exanthema and polyneuritis, which may rarely occur after vaccination, are not necessarily connected to the administration of oral poliomyelitis vaccines.

Very rarely, there may be vaccine-associated paralysis. Persons in close contact with a recently vaccinated child may very rarely be at risk of vaccine-associated paralytic poliomyelitis.

Estimates of the frequency of vaccine associated paralytic polio in the literature range from 1 per 143,000 to 1 per 1,000,000 potentially based on differences in case definition or population differences. (see References)

Persons in close contact with a recently vaccinated child may very rarely be at risk of vaccine-associated paralytic poliomyelitis.

Consult a doctor in case of any reaction different from the ones indicated above.

Apnoea* in very premature infants (≤28 weeks of gestation) see section Warning

*Note: *WHO decided not to have this information in the UNICEF and PAHO leaflet, also not required in the WHO Model Insert.*

8 Interactions

Interactions

There is no evidence of interactions that indicate that Bivalent OPV (type 1&3) cannot be given concomitantly with other drugs and vaccines.

9 Pregnancy and Breast-feeding

Pregnancy and Breast-feeding

Not applicable.

10 Overdosage

No data on overdose are available from Bivalent OPV (type 1&3). Based on data from Polioral, no adverse impact of overdose is expected.

11 Clinical pharmacology

Pharmacodynamic Properties*

Pharmacotherapeutic category: Poliomyelitis Vaccine. ATC code: J07BF02
Bivalent OPV (type 1&3) is a biological preparation for active immunization against poliomyelitis. It is prepared from the attenuated poliomyelitis viruses Type 1 and Type 3 (Sabin) grown on kidney tissue cultures of *Clorocebus aethiops*.
The administration of the oral poliomyelitis vaccine provides a subclinical infection; the attenuated viruses contained in the vaccine multiply in the intestine and they cause a benign infection of the intestinal epithelium cells. The vaccine confers serum immunity as well as a local immunity. The faecal elimination of the attenuated viruses may continue for 1 to 3 weeks from vaccination.
Data on the duration of vaccine-induced antibody persistence are limited. Antibody concentrations decline over time, sometimes to levels that are undetectable, but immunity against paralytic disease appears to be lifelong.

**This section is not reflected in the WHO leaflet*

12 Clinical studies

Clinical data with Bivalent OPV (type 1&3) are not available.

13 Non-clinical safety data

Nonclinical pharmacology and toxicology studies have not been conducted.

14 Pharmaceutical information

Incompatibilities

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

Shelf Life

Bivalent OPV (type 1&3) has a shelf life of 2 years if kept at a temperature of -20°C or less. Do not use the vaccine after the expiry date.

Special Precautions for storage

The vaccine is potent if stored:
- at -20°C or less until the expiry date indicated on the cap of the plastic dispenser;
- between +2° to +8°C up to 6 months.

Vaccine potency is lost if exposed to temperatures of 37°C or higher for more than 24 hours (check VVM for temperature exposure and discard point)
The expiry date on the box refers to product kept at -20°C in integral packaging.
Protect from the light.

Keep the medicine out of the reach and sight of children.

Note: The following paragraph is to be included in section "Administration" of the WHO leaflet since no dedicated section is available in the WHO model Insert

Once opened, multi-dose dropper-dispensers of Bivalent OPV (type 1&3), should be kept between + 2°C and + 8°C for up to a maximum of 4 weeks (from a microbiological point of view, storage conditions are under the responsibility of the users). However, after first opening, immediate use is recommended.

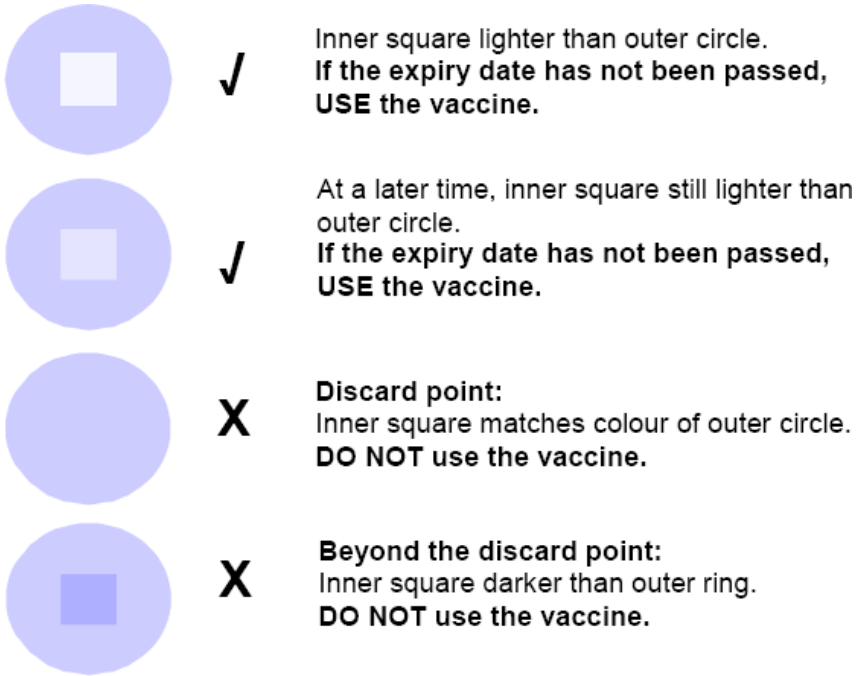
Multi dose dropper-dispensers of Bivalent OPV (type 1&3) from which one or more doses of vaccine have been removed during an immunization session, may be used in subsequent immunization sessions for up to a maximum of 4 weeks, provided that all the following conditions are met (as described directly below in the *WHO policy statement:*

The use of opened multi-dose vials in subsequent immunization sessions. WHO/V&B/00.09):

1. The expiry date has not passed;
2. The vaccines are stored under appropriate cold chain conditions;
3. The vaccine vial septum has not been submerged in water;
4. Aseptic technique has been used to withdraw all doses;
5. The vaccine vial monitor (VVM), if attached, has not reached the discard point (see figure).

For WHO VVM is requested, please include the following paragraph and related VVM interpretation image text:

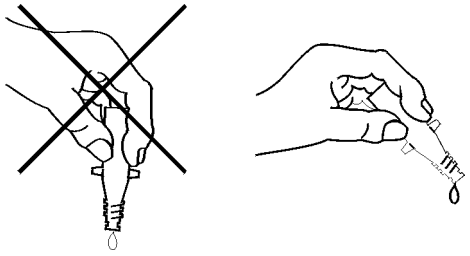
The dispenser blue cap is equipped with the Vaccine Vial Monitor (VVM). This is a time temperature sensitive dot that provides an indication of the cumulative heat to which the dispenser has been exposed. It warns the end user when exposure to heat is likely to have degraded the vaccine beyond an acceptable level.
The interpretation of the VVM is indicated in the figure below, and it is focused on the central square.
As long as the colour of the central square is lighter than the colour of the ring, then the vaccine can be used.
As soon as the colour of the central square is the same colour as the ring or of a darker colour than the ring, then the dropper-dispenser should be discarded.



Instructions for Use of the Dropper-Dispenser

Shake the dispenser well before using.

The blue cap is supplied with a perforating device. At the time of use turn the cap clockwise to puncture the dropper then unscrew it. The plastic dispenser is to be held in an oblique position with the cap down. A slight pressure on the dispenser, kept in an oblique position (45°), will allow exit of one drop; between one drop and another, the dispenser should be brought to the up-right position.



Special Precautions for disposal *

Non-used or expired vaccine, dropper-dispensers and any spoons that may have been used during administration should be sterilized before discarding.
Once sterilized, any unused product or waste material should be disposed of in accordance with local requirements.

*Note: *The above information is to be included in section "Precaution" of the WHO leaflet since no dedicated section is available in the WHO model Insert*

Description of Container and Closure

100 plastic (polyethylene) dropper-dispensers, each of which contains 20 doses.*

* *Note: To be updated when national labels are drafted.*

15 References

1. "Endgame" Issues for the Global Polio Eradication Initiative. Technical Consultative Group to the World Health Organization on the Global Eradication of Poliomyelitis. Clinical Infectious Diseases 2002; 34:72–7

2. Vaccine-derived poliovirus (VDPV): Impact on poliomyelitis eradication. Philip Minor, Vaccine 27 (2009) 2649–2652

16 (D)CDS Version Tracking

DCDS	**Previous version #/date**	**New version #/date**	**Nature of change**	**Reason for change**
CDS	**Previous version #/date**	**New version #/date**	**Nature of change**	**Reason for change**
		Version 1 29 March 2011	Initial CDS version	
	Version 1 29 March 2011	Version 1.1 29 March 2011	Addition of a section on "Appearance", and other minor edits	Edits that were approved but inadvertently omitted from version 1