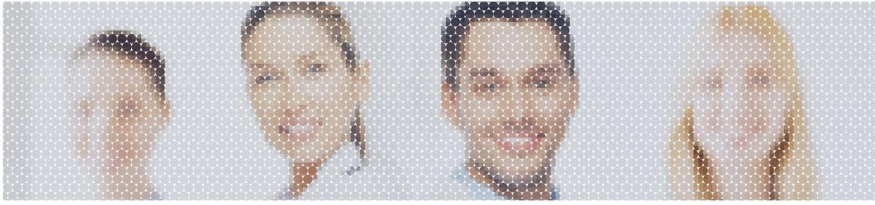

Oral Vaccines

Easy-to-Use Double-Chamber Blister for Liquid or Semi-Solid Medication

Oral medication for simple application, even without a continuous refrigeration chain

For many medications which are administered orally, such as oral vaccinations, a continuous refrigeration chain is required for storage and transport. When it comes to administering the medication, two components often have to be mixed or dosed.

As well as the technical requirements for a continuous refrigeration chain, a clean working environment, trained personnel, and possibly other tools are needed for preparation and administration. What's more, opened containers or tools are also expensive in terms of disposal.

Together with a renowned customer, Pharmapan has developed a concept which eliminates all of these disadvantages so that the medication in question can also be made accessible to patients under difficult conditions, e.g., when specific infrastructure is not available.

The prerequisite for this development is a solid active ingredient (or power mix) which does not perish when it is not kept cool and which can be dissolved quickly in a liquid. After it has dissolved, the medication can be administered orally directly. In this case, the medication in question was an oral rotavirus vaccination for small children.

With the new packaging concept, an appropriate dose of the active ingredient and the necessary amount of solvent are packaged in two separate cavities. The two chambers are protected from one another and also from environmental factors. As a result, the product can be stored and transported over longer periods of time without refrigeration.

To administer the medication, you need to press the rear cavity to transfer the solvent into the cavity with the active ingredient. The strength of the seal has been optimized in such a way that the seal between the two cavities opens but the seal on the outside remains closed.

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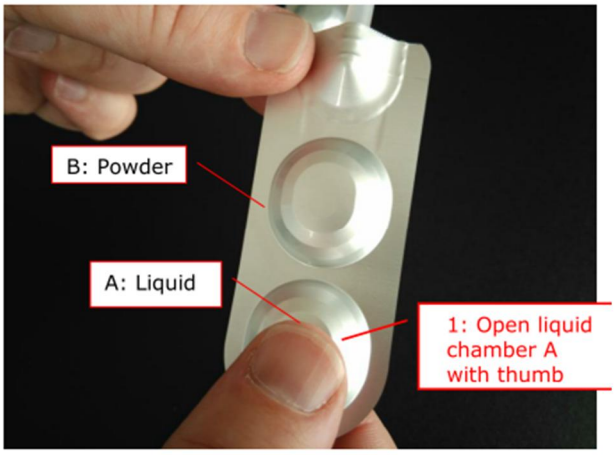
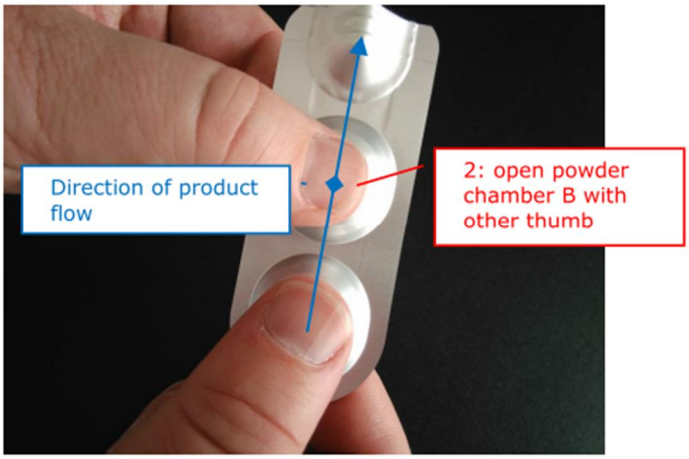
By shaking the package, the powder active ingredient dissolves in the solvent, therefore creating the medication which is ready to use. Pressing on the front cavity breaks the seal for the opening, which is used to administer the prepared medication.

In this example, a spout is sealed to the opening to eliminate the risk of injury from sharp edges. An additional twist-off end protects this spout from contamination.
The type and size of the open can be adapted to the product-specific requirements or the patient's needs.

It makes it possible to prepare ready-to-use medication without the need for additional tools and to administer this medication to the patient orally. The product is packaged safety and cleanly right up until it is administered.

The easy-to-use double-chamber blister shown here can be used for a wide range of liquid or semisolid compounds, most notably sterile products, such as orally administered vaccines, as well as medication to be applied on mucous membranes and to be used for treating wounds.





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