

### KEY POINTS

- Low molecular weight copolymer
- Free of animal origin ingredients
- Terminally sterilized
- Ready for addition to antigen—no temperature control or homogenization is required
- Clear & colorless; no effect on final product appearance or viscosity
- Known to stimulate humoral and T-cell responses

POLYGEN® is a unique, terminally-sterilized, low molecular weight, copolymer adjuvant which can form cross-linkages in solution to become a high molecular weight gel. It is clear and colorless and is free of animal origin ingredients. **POLYGEN** can be mixed directly with vaccine antigens, without any further processing, to enhance the immunogenicity of a finished vaccine.

**POLYGEN** is antigen-friendly in that it can be mixed with your antigen at any temperature and using only mild mixing (no homogenization). Such a process can serve to enhance immunogenicity of the finished product and improve the vaccine's safety profile.

**POLYGEN** can be used alone or in conjunction with other adjuvants, depending on your needs and applications. It is designed for parenteral application in all animals. It has been successfully used in small animal, equine, and bovine vaccines where a T-cell is critical for protection.

**POLYGEN** has been demonstrated to stimulate significant interferon gamma and interleukin 12 responses when used in a parasite vaccine for cattle. It has also been used successfully as a carrier for cytosine-phosphodiester-guanine oligodeoxynucleotides (CpG ODN).

**POLYGEN** may be combined with aluminum hydroxide or other MVP adjuvants. Contact MVP Laboratories for procedures.

### INFORMATION ABOUT POLYGEN

**Immune Response:** **POLYGEN** has the potential for inducing higher levels of humoral antibody, more rapid onset and longer duration of immunity, and better protection with a single vaccine dose as compared to conventional aluminum based adjuvants.

**POLYGEN** has also been demonstrated to stimulate excellent interferon gamma responses. It can be used with bacterial, mycoplasma, viral and parasite antigens (either inactivated or modified live) or with subunit vaccines.

**Animal Safety:** **POLYGEN** has been approved for use in veterinary vaccines by USDA and provides a high degree of safety in companion animals and farm animals, especially with viral, and parasite antigens (either inactivated or modified live) or with subunit vaccines. It is normal for **POLYGEN** to exhibit some toxicity in laboratory mice when injected intraperitoneally at vaccine concentrations.

**Stability:** Because of its unique chemical formulation, **POLYGEN** is exceptionally stable.

**Syringeability:** **POLYGEN** does not alter viscosity or appearance of the final vaccine.

**Uniformity:** The use of highly skilled operators and standardized manufacturing procedures ensures that each batch of **POLYGEN** will be consistent, uniform, and in compliance with established specifications.

**Preservatives:** Because **POLYGEN** is terminally sterilized, preservatives are not generally added. Formaldehyde, gentamicin or other preservatives of choice may be added at the customer's request.

**Ingredients:** Each lot of **POLYGEN** is manufactured to the highest standards using the finest components available. All ingredients meet USP, NF, or equivalent specifications and/or have been approved for vaccine use by USDA. **POLYGEN is free of animal origin ingredients.**

**Testing:** Each ingredient in **POLYGEN** is thoroughly tested and must meet stringent in house parameters for identity and consistency. Each lot of final product is thoroughly tested to ensure that it is free of viable bacteria and fungi. To assure batch-to-batch quality and consistency each lot is tested for conductivity, specific gravity and pH. Processes are carefully monitored during manufacturing.

**Storage:** **POLYGEN** may be stored at 4°C - 30°C (39°F - 86°F). Temperature extremes should be avoided.

**Packaging:** **POLYGEN** is available in 10, 20 and 50 liter containers. Other sizes can be supplied to meet customer needs.

## INSTRUCTIONS FOR USE

- 1) For most antigens, we recommend that **POLYGEN** be used at a concentration up to 20% (v/v).
- 2) **POLYGEN** should be gently mixed for up to 2 hours before adding to the antigen. During addition to the antigen, it is recommended that gentle mixing using standard equipment (e.g. Lightnin mixer or magnetic stirrers) be continued for from 2 to 4 hours.
- 3) It is recommended that the product continue to be gently mixed throughout filling to assure consistency.
- 4) Products containing **POLYGEN** may be administered intramuscularly or subcutaneously to a wide variety of animals.
- 5) **POLYGEN** can be lyophilized separately or in the presence of antigen(s).

## The Adjuvant Company That Understands Vaccines



To speak with an adjuvant expert: 402.331.5106 or 800.856.4648

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