SDA BIO

# Technical Instructions

# SDA 61 P

## High Shear Emulsion Oil-in-Water Vaccine Adjuvant

**Key points of SDA 61 P adjuvant:**

1. The low temperature water phase of the emulsion oil-in-water adjuvant should be dripped into the high speed stirring pre-cooled adjuvant at the slowest speed.
2. stable, well tolerated, nd with mild neutralizing HLB emulsifier, low local and systemic reactions.
3. Good balance between potency and safety
4. 0.2 mg/L VSP70 in aqueous phase can reduce the viscosity of emulsion, effectively overcome maternal antibodies, save antigen,ncrease antibody titers and neutralizing antibodies, improve the cellular immunity.

SDA61P is an oil-based adjuvant for producing poultry oil-in-water (W/O) emulsion vaccines.It containsD RADREAL 6VR mineral oil anda purified oleic acid combined with cocktailed sugar bases from sorbitol, glycerol, mannitol. SDA61P is freef rom animal-derived and synthetic chemical components, as well as immunopotentiating agents.

SDA 61 P neutral emulsifier vaccine can induce strong and long-term immunity. Compared with traditional Span Twain or mannitol oil emulsion, SDA 61 P emulsion vaccine is very stable, well tolerated, good penetration and easy to inject.

**1. Vaccine preparation:**

The weight of the vaccine prepared is typically SDA 61P:60 units aqueous antigen:40 parts

SDA 61 P and antigen can be emulsified in many ways. The required adjuvant and antigen are weighed and stored at 4°C for equilibrium. The adjuvant SDA 61 P and vaccine aqueous medium can be directly mixed from the refrigerator and then homogenized at low speed and high speed.

The viscosity of the mixture may be high if the mixture is directly combined at room temperature and then high speed stirring is started.

The optimal emulsification protocol involves: First, weigh the required adjuvant and antigen and store them at 4°C for equilibrium. Next, transfer the adjuvant SDA 61 P into a high-speed homogenization container and initiate vigorous stirring at over 5000 RPM. Then, remove the aqueous vaccine medium from the refrigeration chamber and add it to the agitated adjuvant at a slow, uniform rate, typically completing the addition within 5 minutes. After antigen addition, continue high-speed stirring for another 5 minutes to achieve a stable emulsion. Numerous studies demonstrate that this low-temperature gradual addition method minimizes antigen degradation and results in the lowest viscosity of the emulsion. Note that SDA 61 P requires a high-shear mixer for preparation to ensure stable and efficient vaccine formulation.

**2. Emulsion Properties: (blank Antigen Medium or 1x PBS)**

| Form of Vaccine | Dynamic viscosy | Conductivity | Particle size Micron | Typical Stability | | |
|---|---|---|---|---|---|---|
| W/O | (mPa.s) | (μS/cm) | | 4 ° C | 25 ° C | 37 ° C |
| Oil-in-water | 25°C about 40 | < 10 | < 1 | At least 12 months | At least 2 months | About 15 days |

3. Immune Response: SDA 61 P enhances vaccine efficacy by inducing a robust and long-lasting immune response. It serves as an excellent adjuvant for stimulating protective immunity in avian and fish models. This product is recommended for bacterial, viral, or parasitic antigens.

4. Species: SDA 61 P Adjuvant is currently used in a variety of vaccines, with versatility for large animals, poultry, and fish. The local reaction in large animals is 5 times lower than that in other foreign emulsion vaccines of the same type.

5. Strength: This adjuvant achieves an optimal balance between efficacy and safety. With its favorable tolerability, it enables sustained protective immunity, making it particularly suitable for antigens with inherently low immunogenicity. Furthermore, it offers the potential to maintain equivalent protection levels while reducing injection doses or diluting fixed doses.

6. Safety and Regulatory Compliance: The SDA BIO series of toxicology studies (including the Berlin test, oral LD50, IP LD50, ocular irritation test, skin irritation test, and thermal irritation test) confirmed the safety and favorable tolerability of these adjuvants.

The properties of the antigen culture medium are critical to the effectiveness and safety of the vaccine.

*Learn more about this product or any recommendations for vaccine optimization*

Pleasereferto *www.sdabio.com* or contact us at vaccine_adjuvants@sdabio.*com*

Phone and WeChat:

13931931567

13601290679

18612535986