SDA 702B
NETWORKED POLYMER GEL
Long-Acting Aqueous Adjuvant

1. PRODUCT OVERVIEW
SDA 702B is a network-type cross-linked polyacrylamide hydrogel (P/O system) designed to provide the slow-release and antigen encapsulation benefits of water-in-oil (W/O) emulsions while avoiding the irritation, viscosity, and residue associated with oil systems. It contains Carbopol 974P with ≤0.5% PLURONIC–mannitol emulsifier and has no animal-derived components. The hydrogel matrix encapsulates antigen, stabilizes its structure, and supports sustained antigen availability. Vaccines formulated with SDA 702B are stable, easy to inject, and exhibit very low reactogenicity. Appearance: clear to slightly bluish opalescent gel-white.

2. VACCINE PREPARATION
Typical antigen-to-adjuvant ratio (by weight): 1 : 4–1 : 9. SDA 702B is fully aqueous and does not require high-shear homogenization. Mixing can be performed at room temperature with moderate stirring. After combining antigen and adjuvant, adjust pH to 6.8–7.2 using NaOH or SDA J-S neutralizing solution to support optimal hydrogel structure. Final vaccine should meet sterility requirements.

3. EMULSION CHARACTERISTICS
System type: aqueous polymer microparticle hydrogel (P/O).
Viscosity (25°C): ~40 mPa·s.
Conductivity: –18 µS/cm.
Particle size: <1 µm.
Stability: ≥12 months @ 4°C; ≥2 months @ 25°C; ~15 days @ 37°C.

4. IMMUNE RESPONSE
SDA 702B enhances vaccine potency by inducing strong humoral and cellular responses, including elevated IFN-γ and IL-12. The polymer network supports prolonged antigen stimulation and efficient antigen presentation. Recommended for bacterial, viral, mycoplasma, parasitic, and recombinant protein antigens.

5. TARGET SPECIES
Suitable for cattle, camels, pigs, sheep, poultry, and other high-value species. Especially beneficial for swine sensitive to W/O emulsions and for poultry vaccines that require slow-release immune stimulation.

6. POTENCY & TOLERANCE
SDA 702B provides long-lasting protective immunity and is effective for low-immunogenicity antigens. It allows dose reduction without loss of potency and shows minimal injection-site reaction with high field tolerance.

7. SAFETY & REGULATORY
Toxicological evaluations (Berlin test, Oral LD50, IP LD50, eye irritation, skin irritation, pyrogenicity) confirm excellent systemic and local tolerance. All raw materials meet USP/NF or EP compendial specifications.

SDA 702B KEY POINTS

- Network-type polymer hydrogel adjuvant.
- Strong antigen encapsulation + controlled slow release.
- Fully aqueous, low reactogenicity.
- Antigen ratio 1:4–1:9 (w/w).
- Excellent syringeability and handling.
- Suitable for bacterial, viral, mycoplasma, parasitic, and subunit antigens.
- Long-lasting immunity with high safety margin.

For more information or vaccine formulation guidance:
www.sdabio.com
Email: sda_gl@163.com