



Probiotic Stability Solutions

Unmatched protection to ensure strain viability and extend probiotic shelf life



Active Packaging Solutions for Probiotic Stability

Unparalleled protection to adsorb moisture and extend shelf life

Aptar Active Material Science offers advanced active packaging solutions for probiotics to ensure stability, extend shelf life, and enhance branding for greater competitive differentiation. Our 3-Phase Activ-Polymer™ platform technology can be deployed in multiple formats, offering you premium packaging solutions to protect your high-value probiotic product.

CSP™ bottles and vials feature our Activ-Polymer™ sleeve that completely surrounds the product to scavenge moisture and block UV light, ensuring greater product stability and potency over traditional bottles using a desiccant canister or sachet. Blister-based solutions are also available.

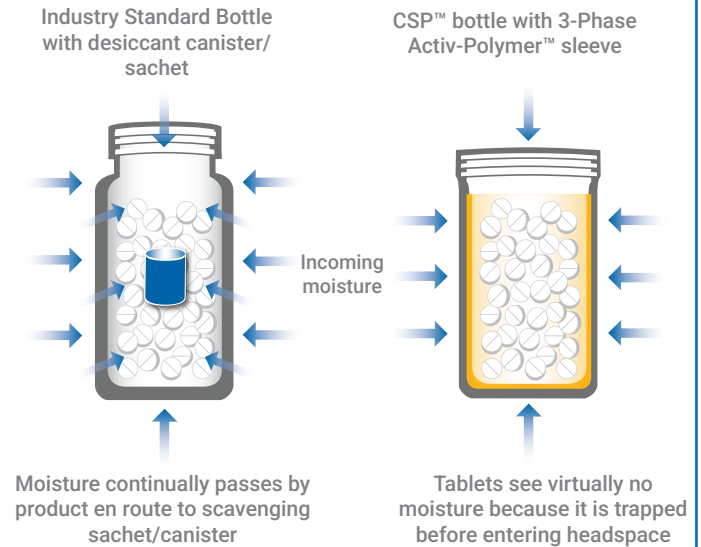
For powder-based probiotics, our technology can be deployed as an Activ-Film™ material heatstaked to foil pouches, a fully-integrated flexible film (ActiFlex), or as our Avanti active cap, which protects powder formulations inside of a bottle cap for reconstitution. We also offer our NEO™ active molded sphere for oil-based formulations.

Visit our website to learn more about our wide range of deployment methods to suit your probiotic.

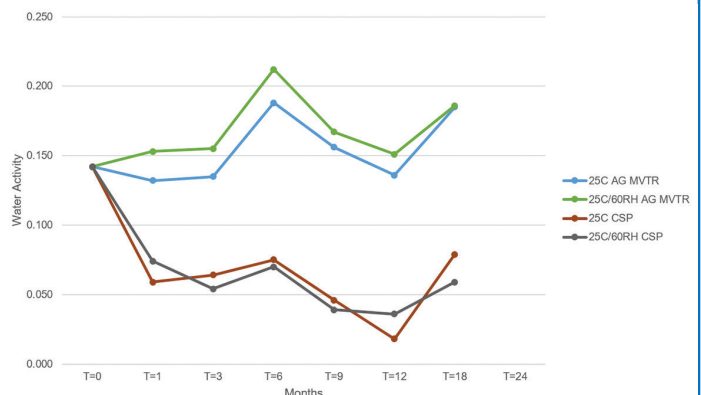
Benefits

- **Shelf life extension = enhanced stability and efficacy**
Unparalleled protection to adsorb moisture allows you to take your product out of the refrigerator and extend shelf life performance over traditional packaging options.
- **Expanded formulation development opportunities** Enables unique combinations of ingredients that aren't feasible in solutions that provide less protection.
- **Enhanced viability of cultures = cost reduction through reduced overage and higher margins**
Our technology maintains the viability of cultures and can enable brands to reduce overage levels typically required to meet end-of-shelf-life label claims.
- **Proven expertise with probiotics**
Aptar Active Material Science is a leader in delivering innovative, high-quality active packaging solutions that give customers a competitive edge and consumers a better product experience. Major global brands rely on Aptar Active Material Science as a trusted sole source supplier and continue to reinvest with us on next generation products.

CSP™ Injection Molded Bottles



Water Activity in Probiotics + Cranberry Capsules (CSP™ Activ-Vial™ vs. Amber Glass with Desiccant)



Potency of Probiotics + Cranberry Capsules (CSP™ Activ-Vial™ vs. Amber Glass with Desiccant)

