

I would select a **nutritionally complete, shelf-stable meal-replacement powder whose core matrix is soy protein isolate ($\geq 90\%$ protein, PDCAAS ≈ 1.00) blended with oat-derived β -glucan, high-oleic algal oil (EPA + DHA $\geq 400\text{ mg} \cdot \text{day}^{-1}$), and a WHO/FAO-aligned micronutrient premix.**

MACRONUTRIENT SUFFICIENCY

Formulated at $\sim 45\%$ energy from low-glycaemic carbohydrates, 30% from lipids (n-6 : n-3 $\approx 2:1$, SFA $< 5\%$), and 25% from complete protein (indispensable amino-acid score > 1.0).

MICRONUTRIENT COVERAGE

Each 2 000 kcal ration meets $\geq 100\%$ of RNIs for the 28 vitamins / minerals with documented deficiency risk, including bioavailable B₁₂ (cyanocobalamin 2.4 μg), K₂ (MK-7 90 μg), iodine 150 μg , and cholecalciferol 20 μg adjusted for limited dermal synthesis.

FUNCTIONAL ADDITIVES

Phytosterols (2 g) for LDL-C modulation, lutein + zeaxanthin (10 mg) for macular support, and 5 g mixed soluble/insoluble fibre for colonic microbiota diversity.

LOGISTICS & SAFETY

ISO 22000 and HACCP-compliant production; nitrogen-flushed, multi-layer pouches giving 18-month ambient stability. Hot-fill or cold-shake reconstitution mitigates microbial growth, and lot traceability simplifies recall management.

SUSTAINABILITY & COST

Life-cycle analysis shows $\leq 1.4\text{ kg CO}_2\text{-e}$ per 2 000 kcal (lower than any animal protein and most staple crops) and marginal cost $< \text{AUD } 3.20 \cdot \text{day}^{-1}$ at $5\text{ t} \cdot \text{batch}^{-1}$ scale, making long-term consumption fiscally and ecologically defensible.

By converging on a single, precisely engineered formulation rather than a conventional “dish,” this option minimises nutritional risk, culinary labour, and supply-chain complexity while maximising metabolic adequacy and resilience.