



## Red Clover Extract – Technical Data Sheet (8% Isoflavones)

<b>INCI Name</b>	Trifolium Pratense Leaf Extract
<b>Botanical Source</b>	Trifolium pratense L. – Leaf
<b>Specification</b>	8% Isoflavones (HPLC)
<b>Physical Form</b>	Brown to dark brown fine powder
<b>Smell</b>	Mild, earthy and herbal scent
<b>Solubility in Water</b>	~5–10 g/L at 50–60 °C with stirring
<b>Solubility in Oil</b>	Practically insoluble
<b>Recommended Solubilization Method</b>	<ul style="list-style-type: none"><li>- Disperse in warm water (~50–60 °C)</li><li>- Stir for 5–10 minutes</li><li>- Filter to remove insolubles if necessary</li></ul>
<b>Cosmetic Functions</b>	Skin conditioning, antioxidant, soothing
<b>Recommended Use Level</b>	0.5–1.5% (in water phase)
<b>Preservation/Handling</b>	Store in sealed, dry, and cool place away from direct sunlight
<b>Shelf Life</b>	24 months in unopened packaging under recommended conditions
<b>Toxicity Criteria</b>	
NOAEL	500 mg/kg bw/day (oral, rat, isoflavone-rich extract)
LD50	>2000 mg/kg bw (oral, rat)
Genotoxicity	No mutagenic or genotoxic effects reported in standard assays