



REDUCED ISO EXTRACT (RHO-30)

OVERVIEW

- Rho Iso Extract is the aqueous solution of the potassium salts of reduced iso-alpha acids. It is derived from CO₂ hop extract.
- Rho-30 contains 30% of reduced iso-alpha acids (if measured by HPLC, or 35% if measured by photo-spectrometric method). Rho-30 and Rho-35 are thus synonyms, based on different analytical measurement systems.
- When Rho-30 is added as the exclusive hop product in brewing (or in combination with other light-stable products like hop oils or Tetra Iso Extract), it protects the beer against light-struck flavor.
- Its bitterness profile in beer is well-rounded, not lingering and smoother compared to Iso Extract or Tetra Extract.

PROPERTIES & SPECIFICATIONS

- **Appearance:** amber / red-brown, free flowing aqueous solution.
- **Rho iso-alpha acids:** 30% (by HPLC, or 35% by Spectro)
- **Iso-alpha acids:** below detection limit
- **Alpha acids:** below detection limit
- **pH:** approx. 8.5
- **Viscosity:** 20 - 25 mPas @ 20°C
- **Density:** 1.070 – 1.080 g/l @ 20°C
- **Flavor:** Rho-30 only imparts bitterness, not the aroma of hops. Its bitterness is not lingering, the profile smoother compared to other downstream hop extracts.
- **Chemical Residues:** heavy metals, nitrates and most agricultural residues are significantly reduced during extraction.
- **Packaging:** 20 kg buckets

PRODUCT USE**

- **Application**
Rho-30 can be used in the wort kettle without any pre-treatment, as well as downstream in the cold block after heating up to 60°C. Precipitation in the bucket can be solved by prior shaking to ensure full dissolution of the potassium salts. In-line dosing into the beer stream (before final filtration / clarification if added post fermentation) is preferable.
- **Light stability**
To achieve its protection against light-struck flavor, use Rho-30 without any other hop product, only other light-stable extracts like Tetra or hop oils might be combined. Cross-contamination with other sources of iso-alpha acids needs to be prevented by all means: do not use yeast that had prior hop contact and clean all surfaces which were exposed to hops.
- **Utilization**
Depending on equipment and process conditions, utilization in the wort kettle usually reaches 45-55%. When used post fermentation, utilization reaches 75-85%.
- **Dosage**
All hop products' dosages depend on estimated or known brewhouse utilization and the desired IBU. However, Rho iso-alpha acids impart only 60-70% of the perceived bitterness of iso-alpha acids. To compensate for this sensory gap, Rho-30 should be dosed 1.6 times higher.
- **Analytical Methods**
Rho iso-alpha acids are usually measured by HPLC (EBC 9.47, but can also be EBC 7.9) or UV spectrophotometrically.
- **Storage & Best Before Date**
Recommended storage is at 10-20°C in sealed buckets. If sealed in these conditions, shelf life is three (3) years. Opened it should be consumed within a few days, preferably stored chilled.