

ENZYMES

BY

SORACHIM

Hexokinase from *Saccharomyces* sp.

HXK-311

SPECIFICATIONS

| | |
|---------------------|--|
| Product name | ATP: D-Hexose 6-phosphotransferase |
| EC | 2.7.1.1 |
| Appearance | White amorphous powder lyophilized |
| Activity | Grade III 150 U/mg-solid or more |
| Contaminants | Phosphoglucose isomerase $\leq 1.0 \times 10^{-1} \%$ 6-Phosphogluconate dehydrogenase $\leq 1.0 \times 10^{-2} \%$ Glucose-6-phosphate dehydrogenase $\leq 1.0 \times 10^{-2} \%$ Myokinase $\leq 1.0 \times 10^{-2} \%$ Glutathione reductase $\leq 1.0 \times 10^{-1} \%$ |
| Stability | Store at -20 °C |
| Molecular weight | approx. 82,000 |
| Michaelis constants | 2.3×10^{-4} M (D-Glucose), 7.7×10^{-5} M (ATP) |
| Inhibitors | Metal ions, p-chloromercuribenzoate, iodoacetamide, SDS, etc. |
| Activators | Mg ²⁺ |
| Optimum pH | 8.0 - 9.0 |
| Optimum temperature | 50 °C |
| pH Stability | pH 4.0 - 9.0 (25 °C, 20hr) |
| Thermal stability | below 45 °C (pH 7.0, 30min) |

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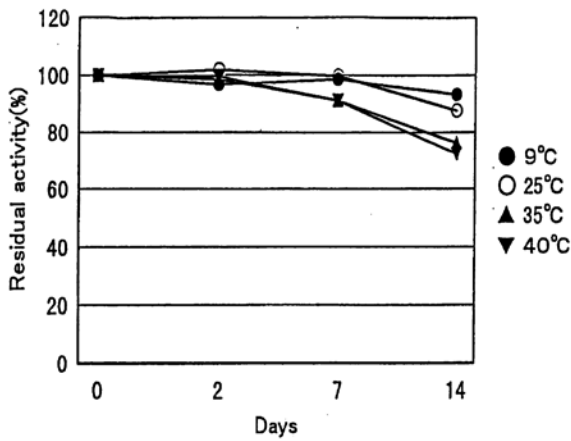
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Hexokinase from Saccharomyces sp.

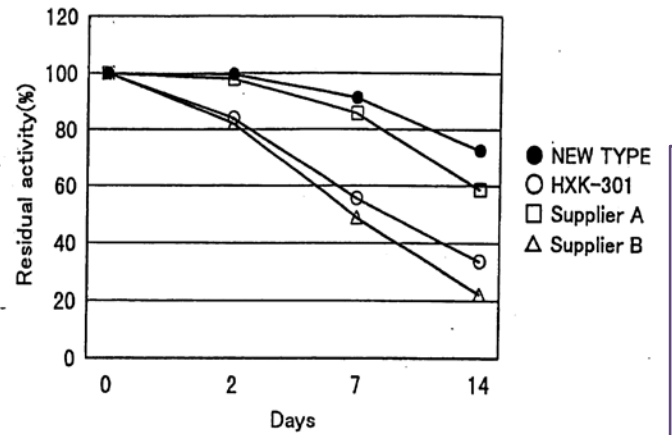
HXK-311

SPECIFICATIONS

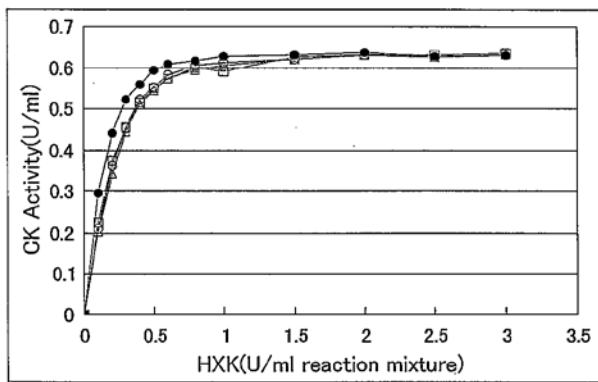
Stability in the working solution of CK



Stability at 45°C in the WR of CK



Reactivity in the working solution of CK



- HXK-311
- HXK-301
- Supplier A (from Yeast; chemically modified)
- △ Supplier B (from Bacillus stearothermophilus)

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Residual activity of HXK-311 after 7 and 14days at 40°C

| Preservatives | Concentration (%) | Residual activity(%) | |
|---------------|-------------------|----------------------|--------|
| | | 7 days | 14days |
| None | — | 87 | 59 |
| NaN3 | 0.02 | 83 | 60 |
| | 0.1 | 87 | 58 |
| MIT | 0.1 | 74 | 33 |
| | 0.3 | 0 | 0 |
| IZU | 0.26 | 82 | 57 |
| | 0.78 | 67 | 44 |
| BND | 0.04 | 88 | 64 |
| | 0.12 | 84 | 59 |
| CAA | 0.26 | 83 | 57 |
| | 0.78 | 82 | 49 |
| HPO | 0.13 | 84 | 57 |
| | 0.39 | 81 | 52 |
| ProClin150 | 0.01 | 85 | 55 |
| | 0.1 | 85 | 62 |
| ProClin300 | 0.01 | 89 | 59 |
| | 0.1 | 82 | 61 |

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Comparison of residual activity after 14days at 40°C

| Detergents | Concentration (%) | Residual activity(%) | | |
|--------------|-------------------|----------------------|---------|--------------|
| | | HXK-311 | HXK-301 | SupplierA *1 |
| None | — | 59 | 42 | 62 |
| Triton X-100 | 0.05 | 75 | 3 | 28 |
| Emulgen 430 | 0.05 | 75 | 8 | 55 |
| Thesit | 0.05 | 75 | 10 | 52 |
| MEGA8 | 0.05 | 77 | 36 | 61 |

*1 from Yeast (chemically modified)