

S.presso[®]

Complete
liquid enrichment
for *Artemia* and rotifers



KEY BENEFITS

- Innovative suspension/emulsion technology, for superior and consistent performance
- Fast and flexible in use for both *Artemia* and rotifer enrichment
- Designed to perform in different conditions and densities
- Perfectly balanced, includes only the highest quality ingredients



Enrichment of rotifers and *Artemia* - USE



Rotifers



Artemia

PRODUCT PREPARATION & USE

- Take product out of refrigerator at least three hours before use (product becomes more fluid)
- Emulsify **S.presso** in lukewarm water (preferably 35-40°C) at max. 300 g/l by mixing vigorously for three minutes (using an industrial mixer).
- Apply according to enrichment strategy.

TANK PREPARATION

- Clean and disinfect the enrichment tank, airstones air tubing prior to use (use e.g. 200 g/m³ active chlorine + detergent) and rinse well.
- Disinfect the water of the tank with e.g. 10 ppm OCI- and aerate gently for ± 1 hour.
- Deactivate any remaining chlorine by adding 12 ppm sodiumthiosulphate.

TANK SET-UP & OPTIMAL ENRICHMENT CONDITIONS

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| <ul style="list-style-type: none"> • Rotifer density: 1.000-5.000/ml (see enrichment doses) • Salinity 20-30 ppt • Temperature 25-27°C • Aeration medium-strong using open tube aeration • Keep dissolved oxygen higher than 5 ppm by means of a leaky pipe (pure oxygen) or other fine bubble device | <ul style="list-style-type: none"> • <i>Artemia</i> density 300-1.000/ml (see enrichment doses) • Salinity 25-40 ppt • Temperature 26-28°C • Aeration medium-strong using open tube aeration • Keep dissolved oxygen higher than 7 ppm by means of a leaky pipe (pure oxygen) or other fine bubble device |
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| <ul style="list-style-type: none"> • Gently harvest rotifers in a filter bag to avoid physical stress • Rinse rotifers using same water temperature of culture tank • Enrich the rotifers in a separate tank: first add the enrichment (or background feeding) and then the rotifers • Use a background feeding with S.parkle if the total time of enrichment exceed the hours reported below | <ul style="list-style-type: none"> • Add 2 x 500 g S.presso per m³ (at T0 and T10) in the enrichment tank, containing up to 400.000 npl/m³, or different dose for higher densities • Enrich for a period of 18 to 22 hours • Harvest with INVE concentrator rinser at T22 |
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Enrichment strategies

Short term: use up to 260 ppm of **S.presso** in 2 doses at T0 and T3 with a density of 1000 R/ml. Harvest rotifers after 6 hours.

Long term: use up to 300 ppm of **S.presso** in 2 doses at T0 and T4 with a density of 1000 R/ml. Harvest rotifers after 9 to 12 hours.

Art/ml	Total amount of S.presso
up to 400	2 x 500 ppm (total 1000 ppm)
700	2 x 900 ppm (total 1800 ppm)
1.000	2 x 1000 ppm (total 2000 ppm)

ENRICHMENT & HARVEST

Rot/ml	Total amount of S.presso
up to 1.000	max 300 g/m ³
2.000	max 400 g/m ³
5.000	max 600 g/m ³

- **Overnight long term enrichment: 20 hours**
Rotifers can be restocked in a new tank with clear water:

- o A background feeding of 100 ppm **S.parkle** is given every 6 hours prior to the start of enrichment (max. 2 background feedings)
- o Use 2x 150 g **S.presso** per m³, 4 & 8 hours before harvest
- o Harvest the rotifers after 20 hours
- o With this strategy, expect typical HUFA levels of 35 mg/g dwt and a DHA/EPA ratio of min. 4

STORAGE

- | | |
|---|---|
| <ul style="list-style-type: none"> • After enrichment: filter and wash the rotifers with seawater of the same temperature as the water in the enrichment tank. Make sure that the rotifers are always submerged and avoid "splashing" of the rotifers in the filter. • During storage: use open tube aeration for maintaining the rotifers suspended and keep dissolved oxygen > 5 ppm • Advised cold storage: temperature of 8-10°C | <ul style="list-style-type: none"> • Density up to 5.000 nauplii/ml • Salinity 25-40 ppt • Temperature 4-10°C • Oxygen 4-6 ppm • Soft point aeration & aeration diffuser collar • Advised cold storage: temperature of 6-8°C |
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Enrichment kinetics and levels, vitamin C levels

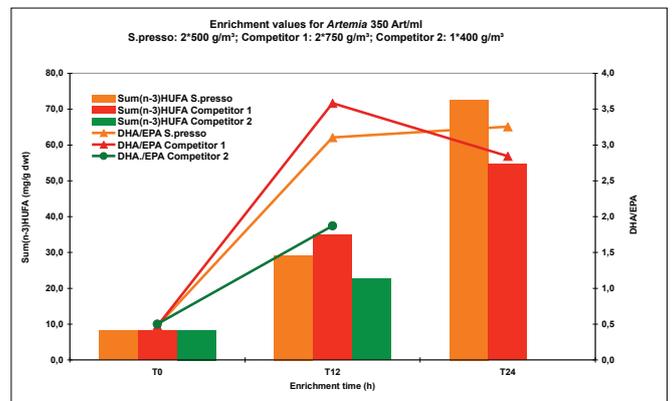
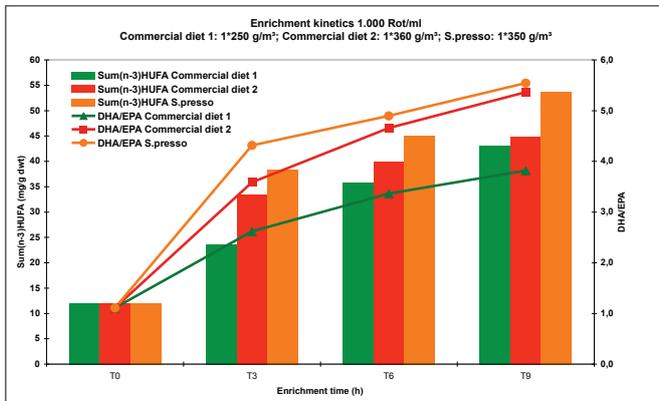
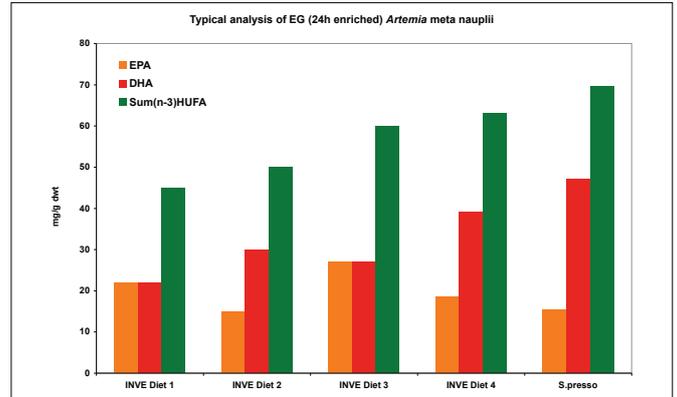
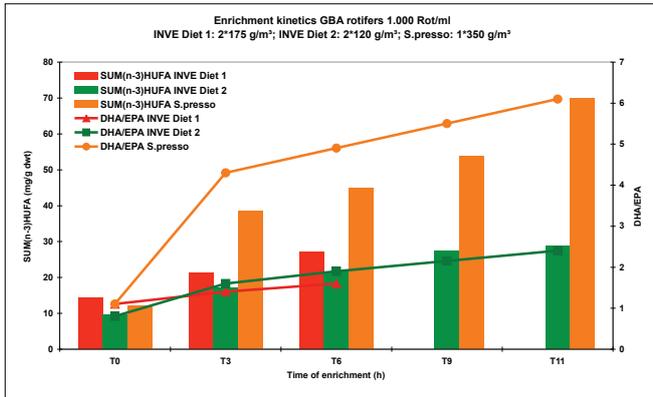


Rotifers - DATA

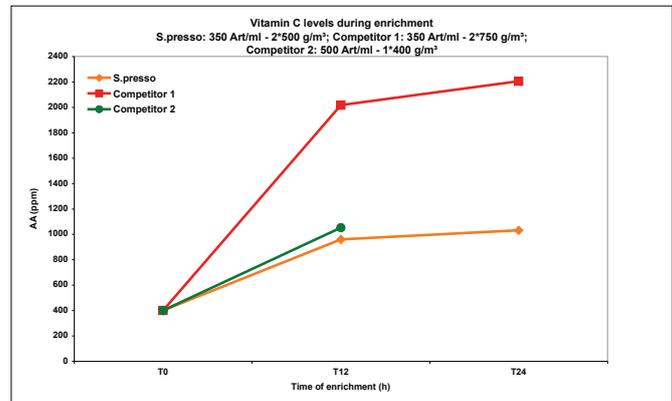
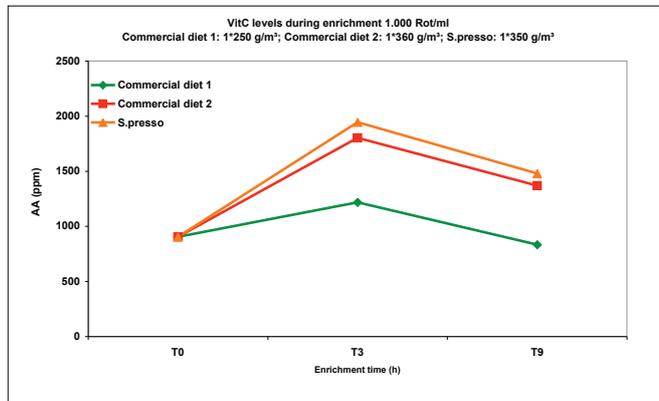


Artemia - DATA

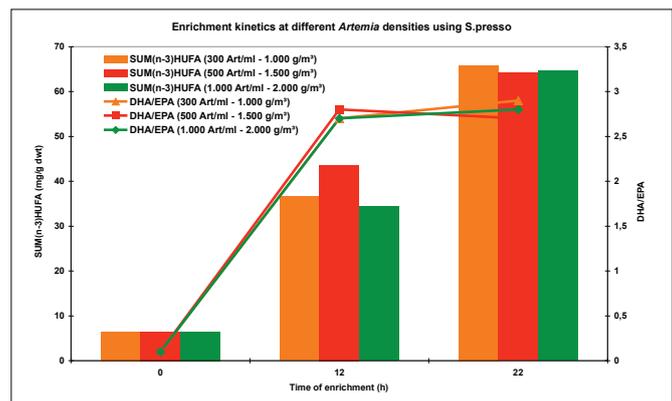
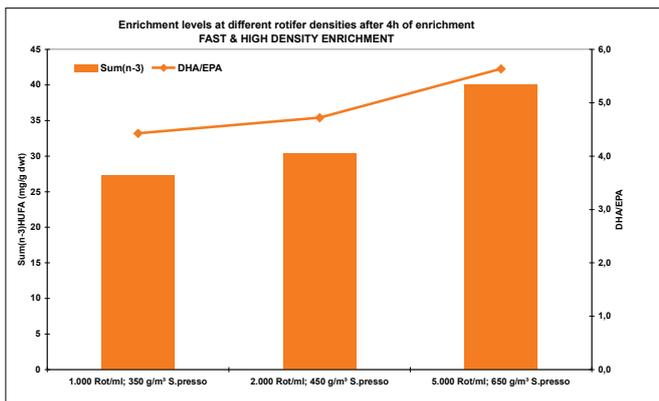
ENRICHMENT KINETICS



VITAMIN C LEVELS



ENRICHMENT LEVELS AT VARIOUS DENSITIES



S.presso is...

A complete live feed enrichment product allowing flexible and clean enrichment with high nutritional benefits.

...INNOVATIVE

An innovative enrichment, designed to meet the most exigent needs in terms of live feed quality improvement. Produced with an advanced process of aqueous suspension and emulsion, it allows the incorporation of a number of beneficial ingredients.

...FLEXIBLE

A very flexible product that allows an easy enrichment up to very high values. It offers a unique solution to multiple enrichment strategies of your choice.

...COMPLETE

A complete liquid enrichment containing trace-elements, micro-elements, lipids, vitamins and proteins.

...CLEAN

Clean in use. It creates an unpolluted environment allowing a perfect rotifer and *Artemia* condition.

COMPOSITION

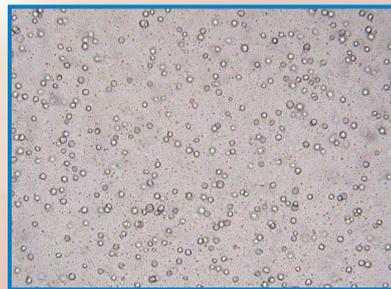
Moisture	58%
Crude protein	2%
Crude lipids	32%
Crude ash	2%
Phosphorus	0,5%
Vitamin A	110.000 IU/kg
Vitamin D3	10.000 IU/kg
Vitamin E	5.400 IU/kg
Vitamin C	8.000 mg/kg
Antioxidants	Ethoxyquin, propylgallate
$\Sigma\omega$ 3HUFA	150 mg/g dwt
DHA/EPA	9

PACKAGING & STORAGE

Available in cartons of 9 x 1kg bottles. Shelf life of 15 months from date of manufacturing.

Store in a cool, dry place (max. 10°C). For prolonged storage periods (i.e. 3 months or longer), refrigeration is advised (4°C). Once opened, the product should be used within one month, kept well closed and stored in a refrigerator. Do not freeze.

AQUEOUS SUSPENSION AND EMULSION TECHNIQUE



After intensive research, INVE Technologies developed the suspension-emulsion technique, an improvement of the SELCO emulsification technology in which liquid and insoluble particles are mixed.

This technique makes S.presso a stable, liquid enrichment product that guarantees optimal intake of the various nutrients by the live plankton.