

OLINDRONAL S P L

NEW

THREE COMPONENT EMULSIFIER

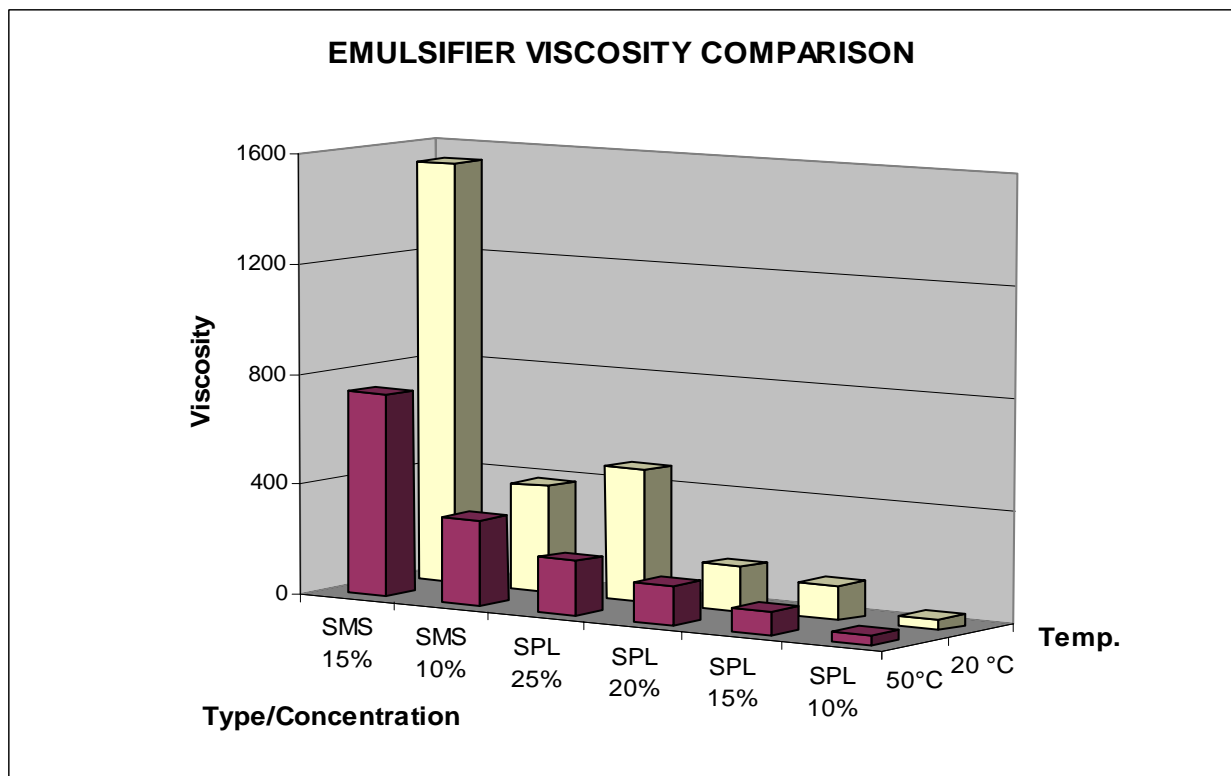
COMPOSITION: STANDARD FOOD GRADE EMULSIFIERS

APPLICATION: **OPTIMISED for YEAST DRYING**

Particularly useful for delicate microorganisms (Wine yeasts, etc.)

ADVANTAGES:

- Higher Activity Retention of IDY During Drying,
- Specific Improvement in Sweet Dough Performance
- Increased Dry Solids of Product
- Improved Storage Stability of IDY
- Easy Dosage Due to Extremely Low Viscosity of Emulsion
- Proven for Industrial Scale Drying in Batch and Continuous Process



CALCULATION EXAMPLE YEAST DRYING

Wet yeast dry Solids	33,68	%
Product input per ton of Instant Dry Yeast (96% D.S., incl. 5% dust losses)	3000	kg

EMULSIFIER CONCENTRATION

	10% w	25% w	
Emulsion	100	40	kg
Total Dryer in	3100	3040	kg
Water Evaporation	2090	2030	kg

Reduced Evaporation	2,87	%
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Specific Consumption Figures

Steam	4,5	tons / ton IDY
Electricity	1500	kWh / ton IDY

Specific Energy Prices

Steam	60	€/ ton
Electricity	0,1	€/ kWh

Related Energy Costs 420 €/ ton IDY

Energy Cost Savings	12,1	€/ ton IDY
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PATENTED COMPOSITION protected by:

European Patent EP 06 007 487

Austrian Patent AT 501 898

INVENTOR and PATENT HOLDER:

Dipl.-Ing., Dr. Paul FRICKO

LICENSED PRODUCTION by

BUSSETTI & Co., Vienna



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THREE COMPONENT EMULSIFIER

BENEFITS

INCREASED ACTIVITY RETENTION, INCREASED DRY SOLIDS

Tests (production scale). Ukraina, 2006, batch drying

Emulsifier Type/Quantity	AOX, 1,6%	SPL, 1%
ADY DS, [%]	96,3	97,2
Activity Lean Dough (1 st .), [ml CO2]	520	590
Activity Lean Dough (2 nd .) , [ml CO2]	820	850
Total (1+2), [ml CO2]	1340	1440 (+ 7,4%)

Tests (production scale). Iran, 2010, continuous drying

Emulsifier	SPL (1%)		SMS (1%)	
	DS	Activity	DS	Activity
09.01.	95,4	1495	95,2	1450
10.01.	94,9	1320	94,1	1315
11.01.	94,3	1475	94,8	1240
Average	94,9 (+0,2%)	1430 (+ 7,1%)	94,7	1335

Tests (production scale). Portugal, 2007

Emulsifier	SPL (1%)	SMS (1%)
Activity Retention (Drying)	89 %	84 %

AVERAGE: 6,5% Increased Activity Retention



REDUCED AGGLUTINATION, INCREASED YIELD

Tests (production scale), Austria, 20010/11, batch drying

Drier was loaded with identical quantity of wet yeast per batch, figures showing total average

	Total # of batches	Quantity out [kg/batch]	Dry Solids [%]	Productivity [kg/min]	Batch out [kg DS]	Batch Yield [%] *)
SPL	125	78	94,5	2,13	74	98,6
SMS	124	73	94,3	2,11	69	91,9

INCREASE + 5 kg / batch

+ 6,7 % **)

*) calculated from drier loading

***) average of three fermentations (wine yeasts)

- **Yield increase inline with reduced drier soiling**
- **Reduced Down-Time for Cleaning**
- **Less Cleaning Chemicals**

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