

NOMENCLATURE	
<b>Trade Name</b>	Xalifin-15®
<b>Description</b>	Polyglycolic esters of fatty acids
USE	
<b>Use Levels</b>	5% - 20%
<b>Properties</b>	Special non-ionic O/W emulsifier. HLB =12
<b>Applications</b>	Dermopharmaceuticals and cosmetics. It produces rich, smooth emulsions of unexcelled stability and texture
IDENTIFICATION	
<b>Appearance</b>	[20°C] paste
<b>Odour</b>	Light characteristic
<b>Colour</b>	White-ivory
<b>Solubility</b>	Lipid systems
<b>HLB</b>	12
<b>Melting point</b>	40°C - 50°C [Method: Instrument Melting Point, Bibby Sterilin Stuart SMP3]
<b>Acid Value</b>	Max 0.9 [Method: NGD C10- 1976]
<b>Iodine Value</b>	Max 5 [Method: Wijs - NGD C32 - 1976]

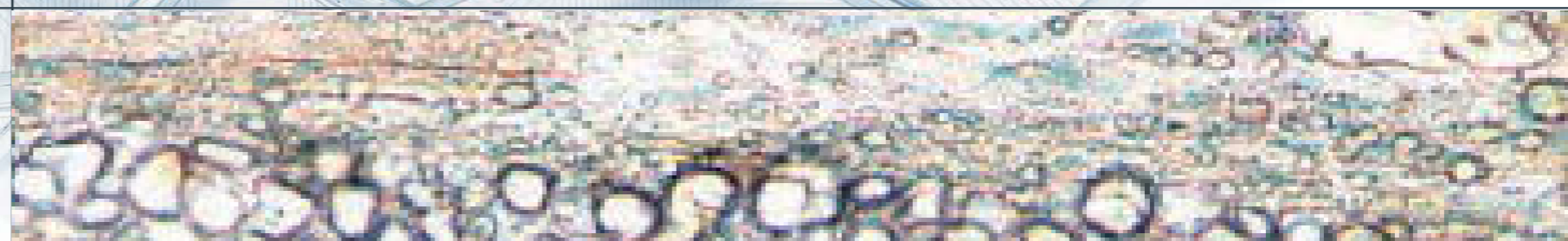
# XALIFIN-15®

THE ONLY O/W BIOEMULGOID  
AT HIGH STABILITY AND RELEASING POWER

Vevy Codex 02.0151

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# XALIFIN-15®

## THE ONLY O/W BIOEMULGOID AT HIGH STABILITY AND RELEASING POWER



Xalifin-15® on [lexicon.vevy.com](http://lexicon.vevy.com)



Sample Order on [www.vevy.com](http://www.vevy.com)

### WHAT IS IT?

Xalifin-15® is, since 1959, the non-ionic O/W BIOEMULGOID for dermo-pharmaceutical and cosmetic products.

Xalifin-15® N-P (Vevy codex: 02.4590) preservatives free version available.

### CHEMICAL STRUCTURE

INCI Name C12-20 Acid PEG-8 Ester.

### A SAFE PRODUCT

#### SOURCE

From vegetable fatty acids and polyethylene glycol.

The absence of ethylene oxide during the production process guarantees that Xalifin-15® is 1,4-dioxane free.

#### % OF NORMAL ENZYMATIC ACTIVITY IN PRESENCE OF XALIFIN-15®

International Enzyme Nomenclature	Biochemical Enzyme Nomenclature	Residual Enzymatic Activity
EC 1.1.1.27	L-lactate dehydrogenase	100
EC 1.1.1.37	malate dehydrogenase	100
EC 1.1.1.42	isocitrate dehydrogenase (NADP+)	100
EC 1.1.1.49	glucose-6-phosphate 1-dehydrogenase	100
EC 1.4.1.2	glutamate dehydrogenase	100
EC 2.6.1.1	aspartate transaminase	100
EC 2.6.1.2	alanine transaminase	100
EC 2.7.1.12	gluconokinase	100
EC 2.7.5.1	phosphoglucomutase	100
EC 4.1.2.13	fructose-bisphosphate aldolase	100
EC 5.3.1.9	glucose-6-phosphate isomerase	100

#### AVAILABLE TOXICOLOGICAL SUMMARIES

- Acute toxicity study - oral;
- Acute toxicity study - intraperitoneal;
- Acute eye irritation test (Draize Test);
- Phototoxicity test;
- Skin sensitization assay.

#### APPLICATIONS

Formulations of liquid and solid O/W emulsions containing:

- Polar and non polar lipids;
- Acids;
- Salts;
- Strong electrolytes;
- Silicones;
- Essential oils;
- Wide range of pharmaceutical and cosmetic actives.

The obtained O/W emulsions will be:

- Well-textured;
- Very stable;
- Non-greasy;
- Easily spreadable;
- Smooth skin feel;
- High Compatibility;
- Excellent Release ability.

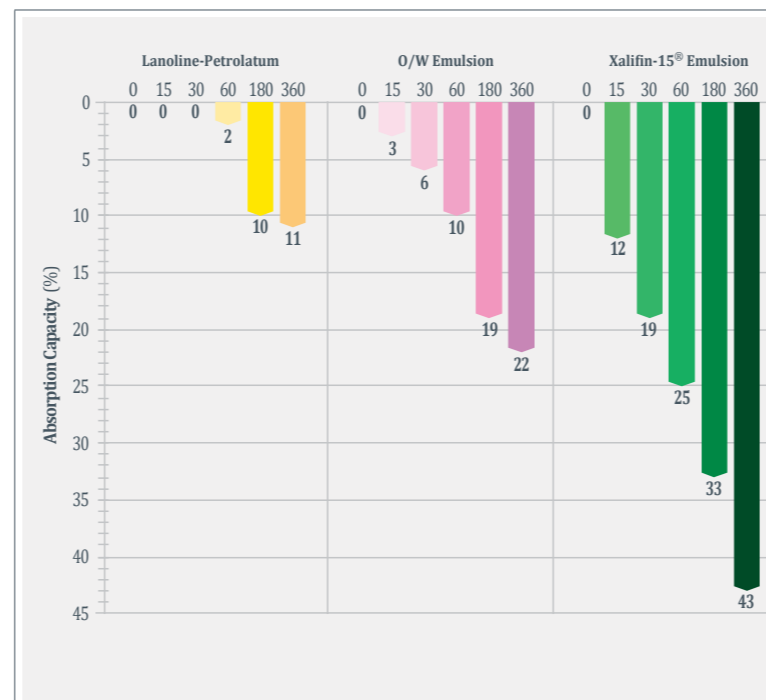
### PECULIARITIES

Excellent penetration through intact skin.

Studies with radioisotopes, fluoresceine and diffusion tests on agar plate demonstrate faster spread of sulfa drugs incorporated in a Xalifin-15® formulated emulsion, rather than in a common O/W emulsion.

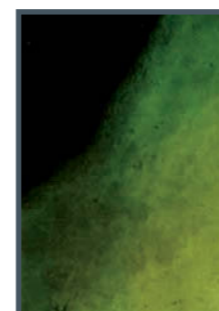
#### ABSORPTION PROPERTIES - STUDY WITH RADIOISOTOPES

35 subjects, equal quantities of emulsion, restricted area of the skin (surface of the left forearm).



#### ABSORPTION PROPERTIES - PENETRATION CAPACITY WITH FLUORESCINE

Emulsions with Xalifin-15® have a higher penetration capacity to fluoresceine.



Rabbit skin treated for 8 hours with a mineral oil and common surfactants emulsion containing fluoresceine.

Emulsion with Xalifin-15® = Higher penetration capacity to fluoresceine

↓ More intense yellow-orange fluorescence

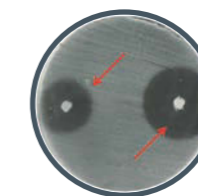


Rabbit skin treated for 8 hours with a Xalifin-15® emulsion containing fluoresceine.

### ACTIVES DIFFUSION ABILITY

Faster speed of drug transfer in the emulsion Xalifin-15®/ Water on the bacteriological cultures in agar plate. See figures below.

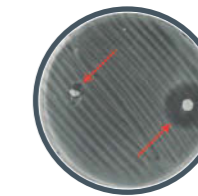
#### Culture of Bacillus subtilis



Left poor release obtained with a sulphonamide O/W emulsion based on common excipients.

Right large and clear area of inhibition surrounding a sulphonamide O/W Xalifin-15® based emulsion.

#### Culture of Staphylococcus aureus



Left no release obtained with a sulphonamide O/W emulsion based on common excipients.

Right large and clear area of inhibition surrounding a sulphonamide O/W Xalifin-15® based emulsion.

Results confirmed that the bacteriostatics, included in the Xalifin-15® emulsion, are diffused faster in the agar plate in respect to the bacteriostatics incorporated in common excipients or in the common oily phase creams.

### BASE FORMULATIONS

BASE VANISHING MILK	%
Xalifin-15®	10.00
Trioxene-LV®	12.50
Undebenzofene®-C	1.30
Cetacene®	3.00
Demineralized Water	61.70
Isoxal®-11	4.00
Propylene Glycol	5.00
ADF-Oleile®	2.00
Desadrops	0.50
<b>Total</b>	<b>100.00</b>

BASE VANISHING CREAM	%
Xalifin-15®	20.00
Trioxene-LV®	10.00
Undebenzofene®-C	1.30
Cetacene®	2.00
Demineralized Water	60.70
Propylene Glycol	5.00
Idroramnosan®	1.00
<b>Total</b>	<b>100.00</b>

### XALIFIN-15® AND THERMAL WATERS

#### SKIN HEALING PRINCIPLES OF THERMAL WATERS USING STABLE AND EUDEMIC EMULSIONS

Xalifin-15®, which is already well known for its emulsifying properties, allows to produce stable emulsions, even when starting from a highly saline continuous phase (i.e. thermal water). By means of a simple technique and with the help of Xalifin-15® it is possible to obtain active, stable, non greasy, highly penetrable emulsions, using thermal waters, nowadays re-evaluated for their dermopharmaceutical properties.

Simple receipt of a solid emulsion made up with 15% of BIOEMULGOID that helps to act deep below the skin surface.

	%
Xalifin-15®	15.00
Thermal waters	85.00
<b>Total</b>	<b>100.00</b>

The activity of the emulsion varies depending on the characteristics of the thermal water source.