

PENGGUNAAN BIOPOLIMER DALAM INDUSTRI  
FARMASI

OLEH

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## HASIL PRODUKSI TABLET, KAPSUL, AMPUL DAN VIAL DI INDONESIA

BENTUK SEDIAAN	PRODUKSI (JUTAAN UNIT)		KENAIKAN (%)
	1969/1970	1982/1983	
TABLET	2.545	10.276	404
KAPSUL	40	1.404	3.503
AMPUL	36	106	294
VIAL	7	80	1.143

VSO/IS.

BIOPOL1

## COGS STRUCTURE

RAW MATERIALS	80 %
ACTIVE INGREDIENTS (65 %)	
INACTIVE INGREDIENTS (15 %)	
PACKAGING MATERIALS	10 %
DIRECT LABOUR	5 %
FACTORY OVERHEAD	5 %

VSO/IS.

BIOPOL2

# PHARMACEUTICAL SPECIFICATIONS OF BIOPOLYMERS (FI, USP, NF, BP)

PURITY

MICROBIAL LIMITS

pH

LOSS ON DRYING

HEAVY METALS

VISCOSITY

OPTICAL ROTATION

VSO/IS.

BIOPOL3

# BIOPOLYMER

A. NATURAL : ALGINATE

B. BIOSYNTHETIC:

- XANTHAN
- DEXTRAN
- SCLEROGLUCAN
- GELLAN
- CURDLAN
- HYALURUNIC ACID
- PULLULAN

# ALGINATE

**SOURCES : BROWN SEaweEDS  
(LAMINARIACEAE/PHAEOPHYCEAE)**

**USES : 1. SUSPENSION : SUSPENDING/THICKENING AGENT**  
**2. OINTMENTS : EMULSION STABILITY**  
**3. EMULSIONS : EMULSIFYING AGENT**  
**4. TABLET : DISINTEGRATOR/BINDER**  
**5. SHAMPOOS : THICKENING AGENT'**  
**6. WOUND DRESSINGS/HEMOSTATIC**

# XANTHAN

SOURCES : PURE-CULTURE FERMENTATION OF A CH  
WITH *Xanthomonas campestris*

USES : 1. THICKENING AGENT  
2. SUSPENDING AGENT  
3. EMULSIFYING AGENT  
4. STABILISER

**SALES VALUE & CONTRIBUTION OF SUSTAINED RELEASE FORMS  
( RP. MIO )**

	DISPENSARIES	HOSPITAL	DRUGSTORES	TOTAL
TTL. PHARMA. MARKET	666,418	171,874	216,172	1,054,464
SUSTAINED RELEASE	6,300	1,191	781	8,272
% CONTRIBUTION	0,95	0,69	0,36	0,78

SOURCES :           INDONESIA PHARMACEUTICAL AUDIT 2Q91.  
                           INDONESIA HOSPITAL PHARMACEUTICAL AUDIT IH91.  
                           INDONESIA DRUGSTORE AUDIT IH91.

VSO/IS.BIOPOL7



## USES OF DEXTRANS - Continued

1. X-RAY : SUSPENDING AGENT
2. VITAMIN PREP. : STABILIZING AGENT
3. TABLETS : BINDING AGENT
4. SUST.RELEASE : PROTRACTS DISSOLUTION
5. CHLORAL-DEXTRAN : SUPRESSES STOMACH IRRITATION  
COMPLEX
7. IODODEXTRAN : SUPRESSES STOMACH IRRITATION

VSO/IS.

BIOPOLB

## DEXTRANS

**SOURCES** : FERMENTATION OF SUCROSE BY MEANS OF CERTAIN STRAIN OF *Leuconostoc mesenteroides* (NCTC NO.10817)

- TYPES & USES** :
1. DEXTRAN 40  
CARDIOPULMONARY BYPASS  
PROPHYLAXIS OF THROMBOSIS &  
THROMBOEMBOLISM
  2. DEXTRAN 70  
PLASMA EXPANDER FOR HYPOVOLEMIC SHOCK
  3. DEXTRAN 75  
PLASMA EXPANDER FOR HYPOVOLEMIC SHOCK

## SCLEROGLUCAN

SOURCES : *Sclerotium glucaenicum*

USES : 1. TABLET COATINGS  
2. OPHTHALMIC SOLUTIONS  
3. ANTIBIOTIC SUSPENSIONS  
4. ANTACID SUSPENSIONS

## HYALURONIC ACID

USES : SURGICAL AID (OPHTHALMOLOGICAL)  
NONINFECTIOUS SYNOVITIS

## **KENDALA INDUSTRI BAHAN BAKU OBAT DI INDONESIA**

1. PASAR YANG BELUM MEMADAI
2. HARGA YANG MASIH BELUM BERSAING
3. ASPEK TEKNOLOGI TINGGI
4. DUKUNGAN INDUSTRI KIMIA DASAR

## **PROSPEK PENGEMBANGAN BIOPOLIMER**

1. NATURAL RESOURCES
2. TEKNOLOGI
3. NILAI TAMBAH