

## ABSTRAK

### PRARANCANGAN PABRIK SIRUP GLUKOSA DARI BATANG UBI KAYU KAPASITAS 35.000 TON/TAHUN

“Perancangan Evaporator (EV-301,302,303)”

Oleh

CHAIRUL UMAM

Pabrik sirup glukosa dengan bahan baku batang ubi kayu direncanakan dibangun di kecamatan Terusan Nyunyai, Kabupaten Lampung Tengah, Provinsi Lampung. Perencanaan pendirian Pabrik pada lokasi ini didasarkan pada ketersediaan bahan baku, kemudahan transportasi, penyediaan utilitas, tenaga kerja yang mudah didapat, dan kondisi masyarakat Lampung yang kondusif.

Pabrik direncanakan memproduksi sirup glukosa 35.000 Ton/Tahun, dengan waktu operasi 24 jam/hari, selama 330 hari dalam satu tahun. Bahan baku yang digunakan yaitu batang ubi kayu sebanyak 10.531 kg/jam.

Penyediaan kebutuhan utilitas pabrik yang dibutuhkan dipenuhi oleh beberapa unit yaitu unit pengolahan air, unit pengadaan steam, unit pembangkit listrik, dan unit pengadaan udara instrumen.

Perusahaan berbentuk Perseroan Terbatas (PT) menggunakan struktur organisasi *Line and Staff* dengan jumlah karyawan sebanyak 179 orang.

Hasil dari analisis ekonomi adalah sebagai berikut:

<i>Fixed Capital Investment</i>	(FCI)	=	Rp. 518.586.266.207,-
<i>Working Capital Investment</i>	(WCI)	=	Rp. 91.515.223.448,-
<i>Total Capital Investment</i>	(TCI)	=	Rp. 610.101.489.655,-
<i>Break Even Point</i>	(BEP)	=	50,56 %
<i>Shut Down Point</i>	(SDP)	=	28,01 %
<i>Pay Out Time before taxes</i>	(POT) <sup>b</sup>	=	2,8 tahun
<i>Pay Out Time after taxes</i>	(POT) <sup>a</sup>	=	3,27 tahun
<i>Return on Investment before taxes</i>	(ROI) <sup>b</sup>	=	21,86 %
<i>Return on Investment after taxes</i>	(ROI) <sup>a</sup>	=	17,49 %
<i>Discounted cash flow</i>	(DCF)	=	23,37 %

Dengan pertimbangan diatas maka pendirian pabrik sirup glukosa ini dapat dikaji lebih jauh, karena pabrik menguntungkan dan mempunyai masa depan yang baik.

## ABSTRACT

### MANUFACTURE OF GLUKOSE SYRUP FROM CASSAVA WOOD CAPACITY 35.000 TON/YEAR

“Design of Evaporator (EV-301,302,303)”

By

CHAIRUL UMAM

Syrup Glucose factory with raw stock from cassava wood was planned to be built on kecamatan Terusan Nyunyai, Kabupaten Lampung Tengah, Provinsi Lampung. This location is chosen based on raw stocks availability, transportation convenience, Provision of utilities, easy to find labor, conducive community conditions.

This factory was planned to produced 35.000 Ton/year of glucose syrup, with operation time 24 hours/day, and 330 day/year. Cassava wood as raw stocks is used as much 10.531 kg/hour.

Required of factory utilities is fulfilled by multiple unit that is water treatment unit, steam supply unit, electric supply unit, and air instrument supply unit.

Company form as Perseroan Terbatas (PT) with Line and Staff organization structure is used. Amount of employee is 179 people.

Economic analisis is showed in down below:

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<i>Return on Investment before taxes</i>	(ROI) <sup>b</sup>	=	21,86 %
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This planning should be learn more because this factory can make profit and have a good future.