

# CYANOBACTERIA



CYANOPHYTA  
(ALGA BIRU)

# ALGA BIRU

- **Berklorofil**, autotrof
- Tidak parasit
- Di perairan / lembab
- **PROKARIOTIK**
- **MONOSELULER/BERKOLONI**



Sebagai VEGETASI PERINTIS

# VEGETASI PERINTIS

- o Vegetasi (tumbuhan) yang dapat tumbuh di habitat yang tidak subur
- o Tidak subur → kadar mineral sangat rendah
- o Vegetasi perintis mampu melapukkan batuan menjadi mineral-mineral yang dibutuhkannya

# CONTOH HABITAT ALGA BIRU

o Hamparan pasir

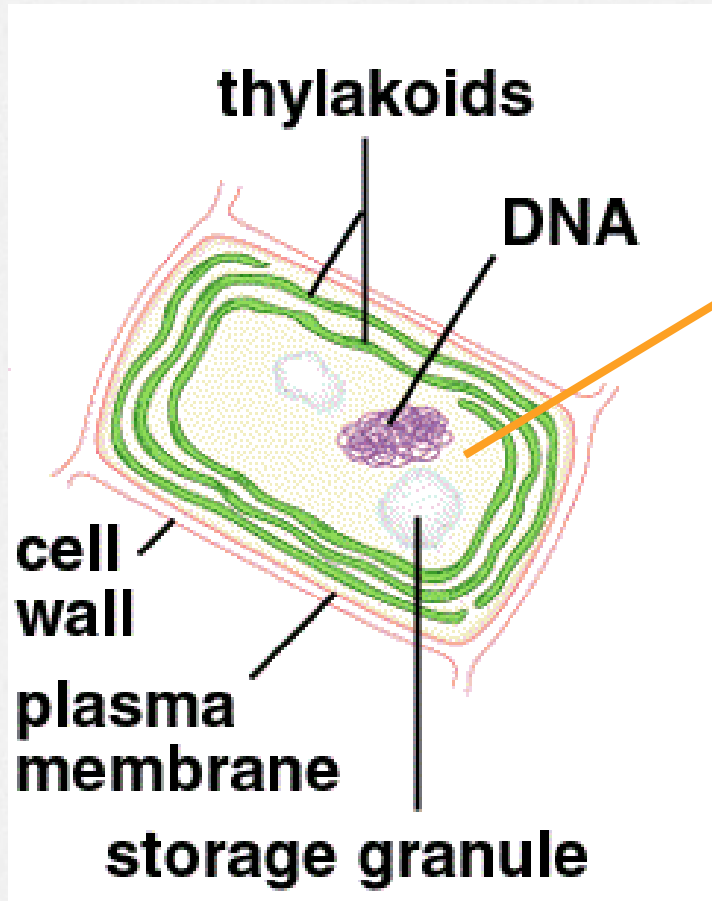
o Batu

o Sawah

o Kolam

Beberapa alga biru membentuk simbiosis:

1. Dengan jamur → Lichenes
2. Dengan tumbuhan paku
3. Dengan tumbuhan pakis haji



PLASMA

## CYANOPHYTA

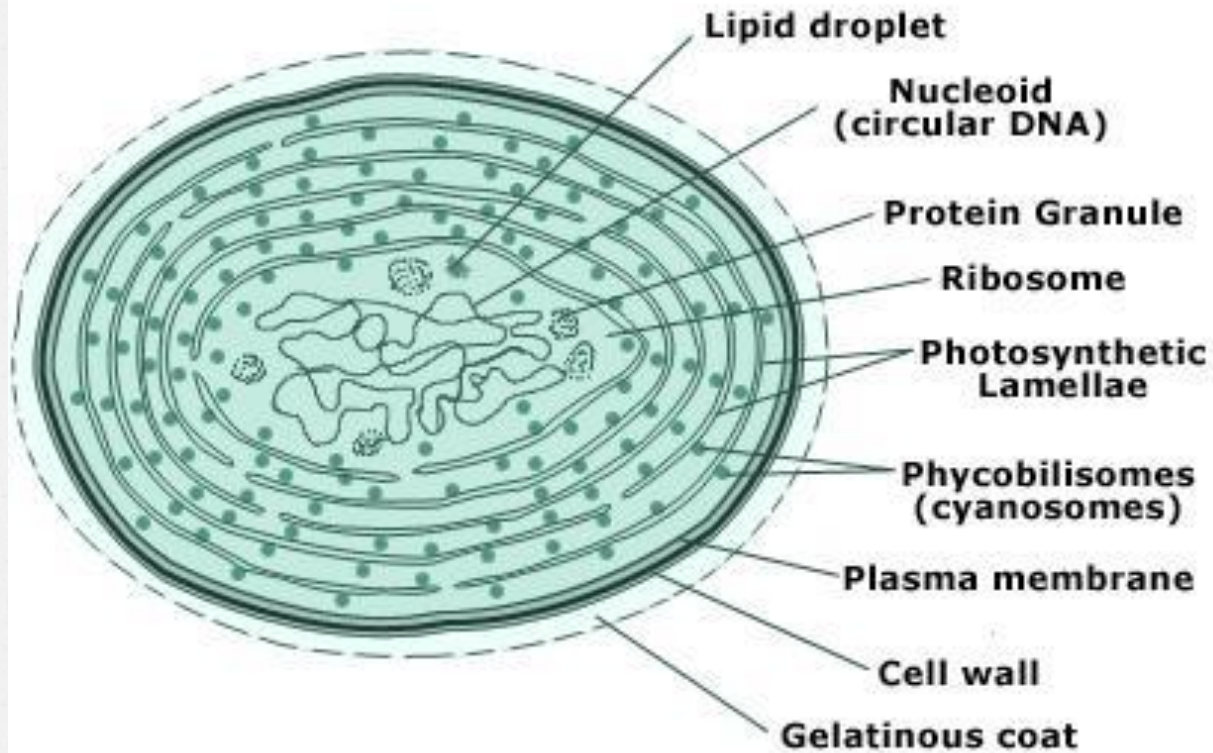
PIGMEN cyanophyta

KLOROFIL : hijau

FIKOSIANIN : biru

[http://www.southtexascollege.edu/nilsson/4\\_GB\\_Lecture\\_figs\\_f/4\\_GB\\_19\\_Bacteria\\_Fig\\_f/Mader\\_Cyanobacteria.gif](http://www.southtexascollege.edu/nilsson/4_GB_Lecture_figs_f/4_GB_19_Bacteria_Fig_f/Mader_Cyanobacteria.gif)

## STRUKTUR SEL CYANOBACTERIA



# Beberapa Jenis Alga Biru

o Anabaena

o Nostoc

o Spirulina

o Oscillatoria

o Rivularia

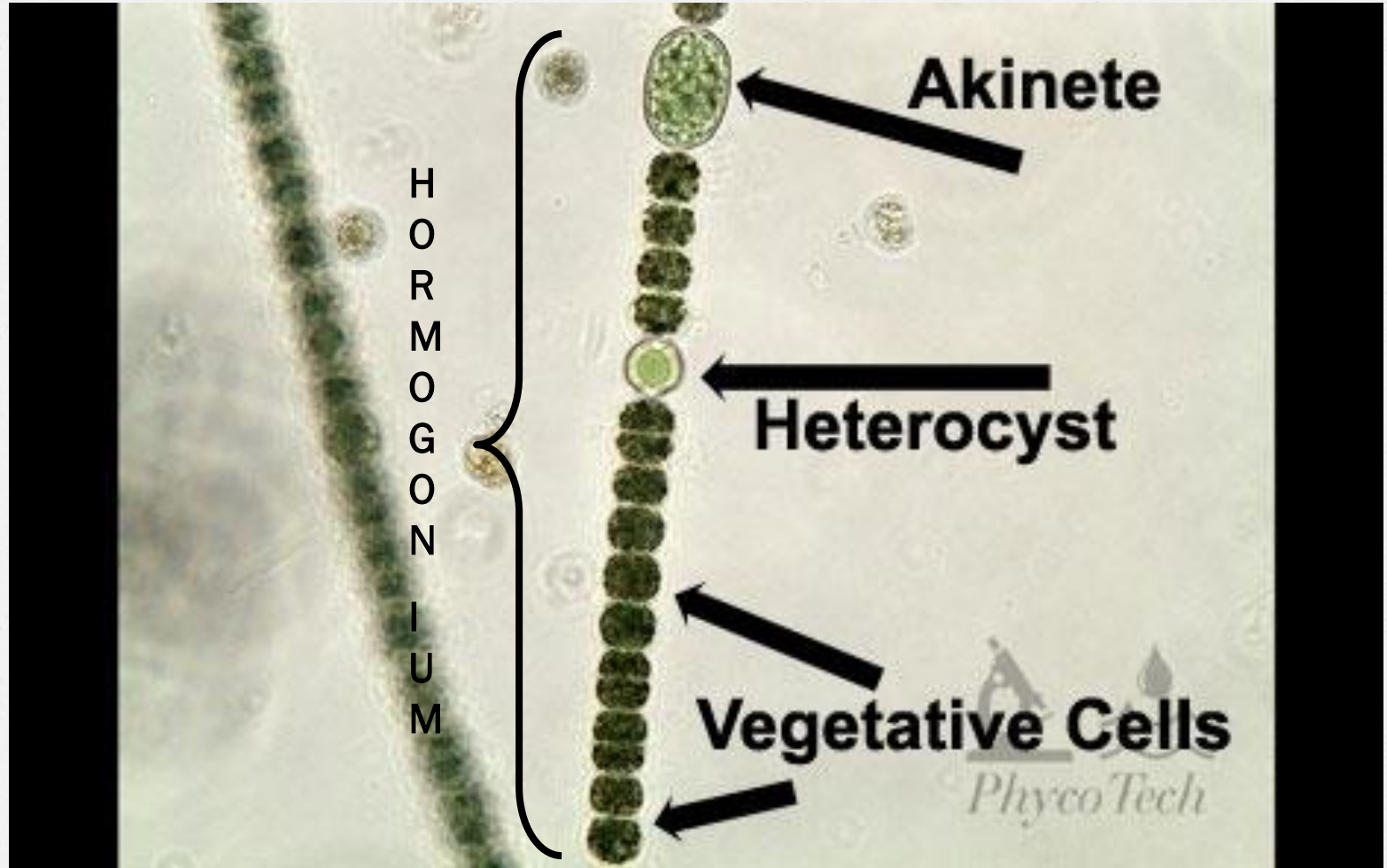
**KOLONI**

o Chroococcus

o Gloeocapsa

**TUNGGAL**

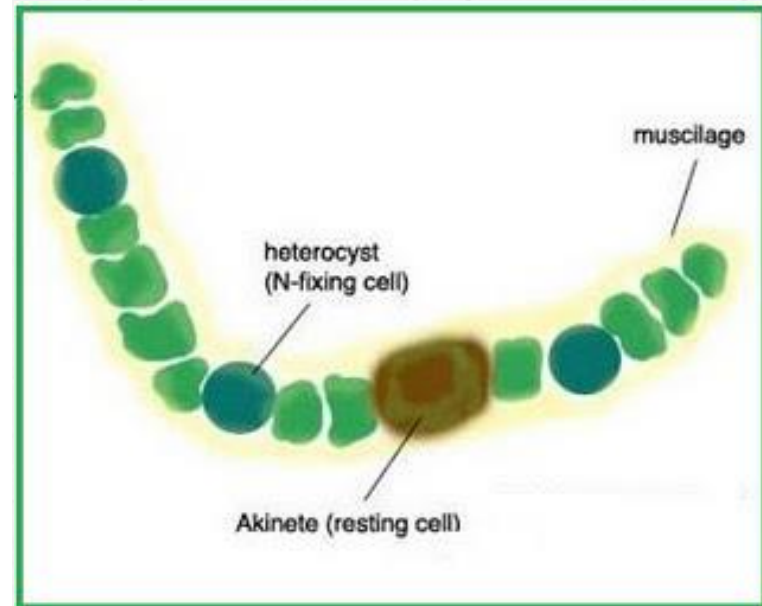
# STRUKTUR KOLONI CYANOPHYTA



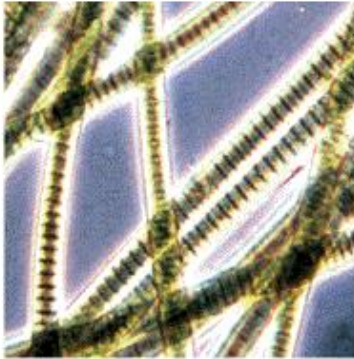


- o **AKINETE** : Sel Besar, Sel tidak aktif (istirahat)
- o **HETEROCYST** : Sel berdinding tebal , pengikat nitrogen
- o **HORMOGONIUM** : koloni berbentuk benang
- o **FRAGMENTASI** : pemotongan koloni

# Istilah



# OSCILLATORIA



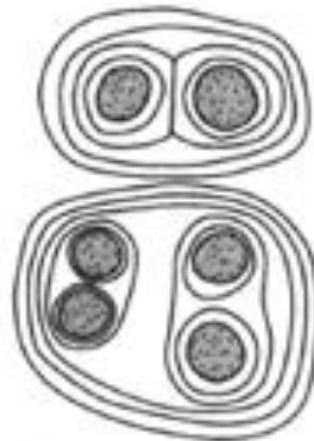
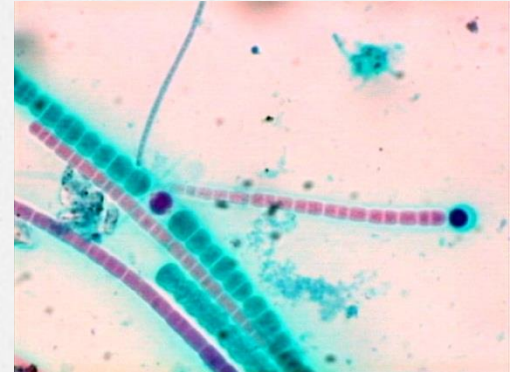
© Eric Grave/Photo Researchers, Inc.

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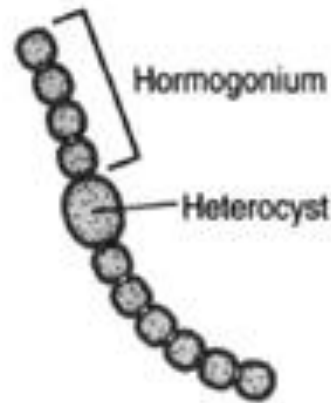
# SPIRULINA SP



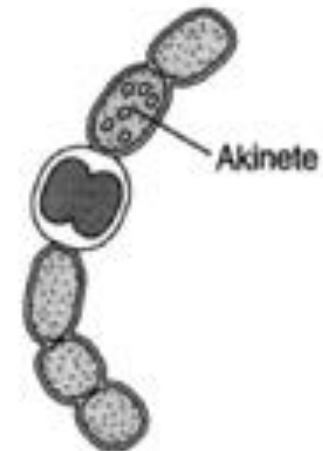
# RIVULARIA SP



**a** Gloeocapsa



**b** Nostoc

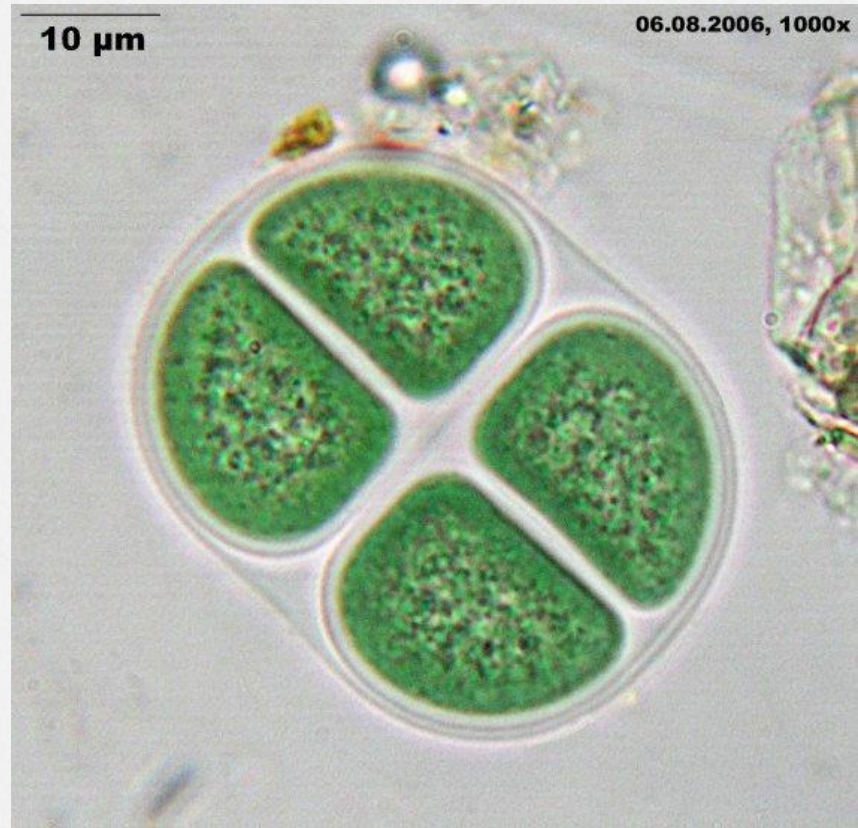


**c** Anabaena

2,4 SEL



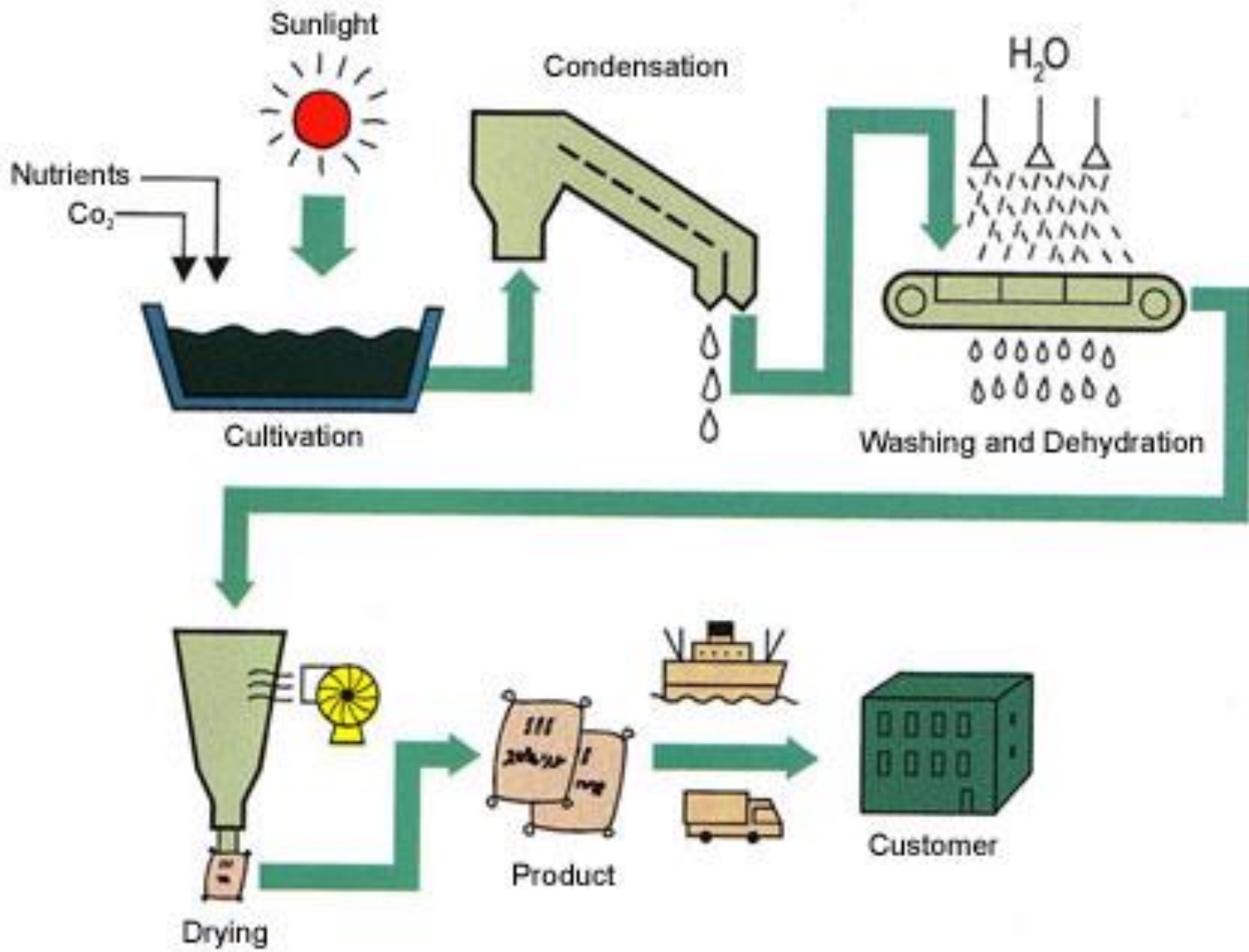
[http://protist.i.hosei.ac.jp/PDB/Images/Prokaryotes/Chroococaceae/Chroococcus/sp\\_05g.jpg](http://protist.i.hosei.ac.jp/PDB/Images/Prokaryotes/Chroococaceae/Chroococcus/sp_05g.jpg)

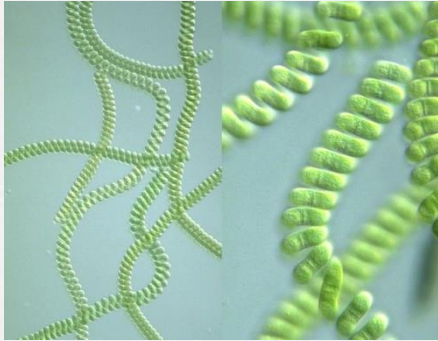


**Chroococcus sp**

SEL MEMBELAH TETAPI TETAP SALING MELEKAT

<b>Peranan Alga</b>	<b>Keuntungan</b>	<b>Jenis</b>
<b>Pengikat Nitrogen</b>	<b>Kesuburan tanah</b>	<b>Anabaena, Nostoc</b>
<b>Penghasil protein</b>	<b>Makanan Suplemen</b>	<b>Spirulina</b>
<b>Fitoplankton</b>	<b>Makanan alami ikan</b>	<b>Berbagai jenis</b>
<b>Vegetasi perintis</b>	<b>Melapukkan batuan, meningkatkan kesuburan tanah</b>	<b>Berbagai jenis</b>





### Protein nabati

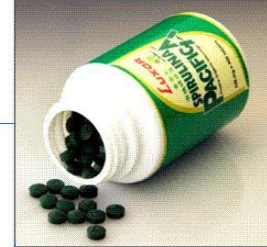
- Protein nabati 60%
- 8 Asam Amino Esensial

### Lemak

- Asam lemak esensial
- GLA
- PUFA

### Karbohidrat

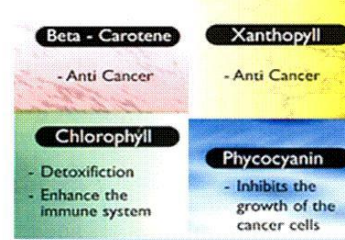
- Serat
- polysacarida



### Vitamin

- Beta carotene
- B1, B2, B3, B6, B12
- E, Asam Folat

### Pigmen Alami



### Mineral

- Ca, Mg, Fe, P, K, Mn, Zn, Na, Se, dll

### Antioksidan

- SOD

[http://1.bp.blogspot.com/\\_4ug2xtfHYKY/TBmZAXgtKdI/AAAAAAAEAA/C6JxjPHEVYE/s1600/komposisi+sp.JPG](http://1.bp.blogspot.com/_4ug2xtfHYKY/TBmZAXgtKdI/AAAAAAAEAA/C6JxjPHEVYE/s1600/komposisi+sp.JPG)



**THANKS**