

<h1>PROCESS BULLETIN</h1>	Document Ref.:	
	<b>PB 6/2/001</b>	
	Issued by:	Date:
	SG	24/05/04

Subject: **Algae cells disruption**

### Typical composition

Chlorella algae or different algae suspension in water 15% p/v.

### The homogenisation process

**Homogenizer used:** Panda NS1001L

**Goal:** more than 80% of cells destroyed

**Pressure applied:** 1000 bar x1 pass, 1000 bar x2 passes, 1200 bar x1 pass, 1400 bar x1 pass

### The homogenisation results

**Analysis method:** Cells count by an optical microscope before and after the high pressure treatment, magnification 400X, (dilution factor 20.000 µl water: 100 µl cells suspension).

**Results:**

Sample	Pressure (bar)	T <sub>inlet</sub> °C	T <sub>outlet</sub> °C	N° of cells*	Rupture%
1	Not treated	-----	-----	53	Reference
2	1000	10	34	12	77%
3	1200	10	37	11	79%
4	1400	10	42	2	96%
5**	1000 x2	25 (before the II pass)	47	4	92%
6***	1000 x2	38 (before the II pass)	55	7	86%

\* Ten counts average value

\*\* The cells suspension was cooled before the second pass.

\*\*\* The cells suspension was not cooled before the second pass.