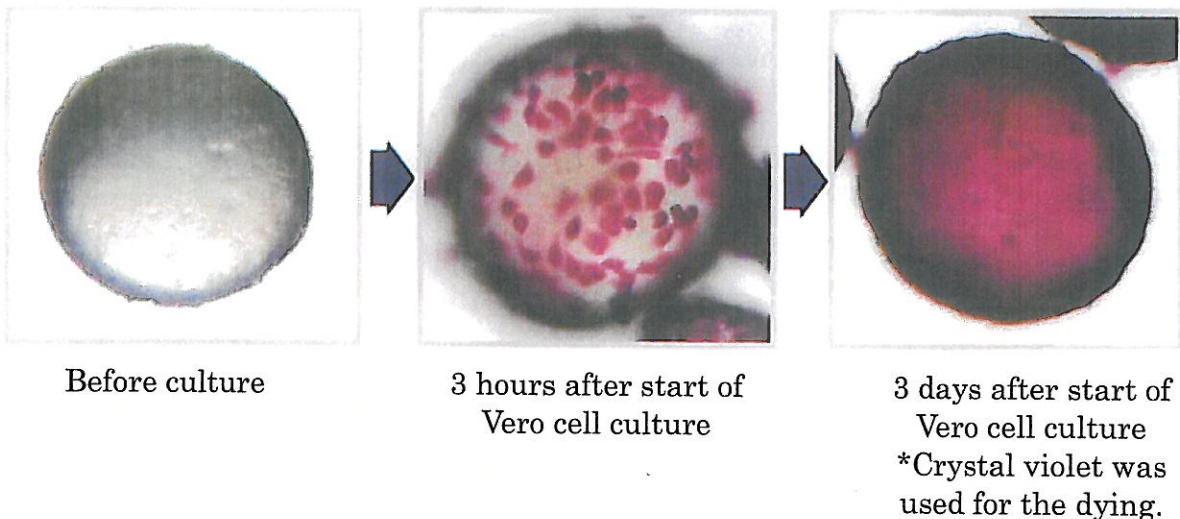




CELLYARD™ beads

Surface activated cell carrier beads
For high density cell culture

The CELLYARD™ series is the general designation for the cell culture carrier developed by PENTAX. CELLYARD™ beads are beads of which the nylon particle surface with the average particle diameters of 200μm or 500μm are coated with hydroxyapatite $[Ca_{10}(PO_4)_6(OH)_2]$. Hydroxyapatite is a calcium phosphate compound that has outstanding biocompatibility and is used for various artificial bones, etc. We have developed a cell culture microcarrier with superior biological affinity based on these properties of hydroxyapatite. It will allow the high density volume culture of a variety of anchorage dependent cells.



FEATURES

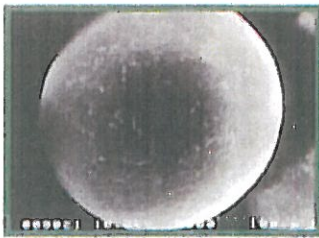
- 1 As with highly pure hydroxyapatite, it adsorbs various proteins and cell, etc.
- 2 Autoclavable at 121°C for 20 minutes.
- 3 The particle diameter has been set to support cell anchorage and proliferation.
- 4 The specific gravity has been set at around 1.03 g/cm³, which facilitates uniform suspension with gentle stirring, and gives static-state natural settling.
- 5 There is no swelling even in the solution.
- 6 The beads of 500μm type provide a small surface curvature for good cell adhesion.



CELLYARD™ beads

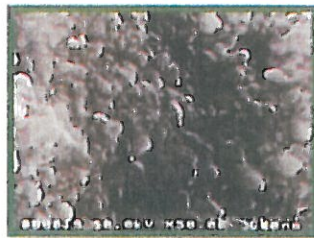
	CELLYARD™ beads200	CELLYARD™ beads500
Specific gravity:	1.01 ~ 1.05 g/cm ³	1.01 ~ 1.05 g/cm ³
Particle diameter:	200 μm ± 50 μm	500 μm ± 75 μm
Bulk density:	0.55 ~ 0.67 g/cm ³	0.55 ~ 0.67 g/cm ³
Autoclave resistance:	Allows high pressure steam sterilization at 121°C, 1bar	
Chemical stability:	Since the surface hydroxyapatite dissolves under the action of (citrate and acetate) organic solvents not exceeding pH 5 and EDTA, etc., use in solvents containing high concentrations of these substances should be avoided.	

CELLYARD™ beads200



SEM image of

CELLYARD™ beads200



SEM image of surface of

CELLYARD™ beads200 coated with hydroxyapatite

CELLYARD™ beads500



SEM image of

CELLYARD™ beads500



3days after start of Vero cell

culture

Product	Code No.	Contents	Price
CELLYARD™ beads200	2200350	50 g	¥18000 / \$172 / €139
	2200351	100 g	¥28000 / \$267 / €216
	2200352	500 g	¥120000 / \$1143 / €924
CELLYARD™ beads500	2200358	50 g	¥18000 / \$172 / €139
	2200356	100 g	¥28000 / \$267 / €216
	2200357	500 g	¥120000 / \$1143 / €924



CELLYARD™ beads may also be made to order.

Consultations welcome on contents and particle diameter requirements, etc.

Reference

1. Sugo K, Kato M, Ishikara T, Yamamoto A and Ogawa T. HYDROXYAPATITE MICROCARRIER(1). *Tiss. Cult. Res. Commun.* 2006;25:105-111.
2. Sugo K, Kato M, Ishikara T, Yamamoto A and Ogawa T. HYDROXYAPATITE MICROCARRIER(2). *Tiss. Cult. Res. Commun.* 2006;25:113-118.
3. Sugo K and Ogawa T, Three-dimensional culture of Rat Bone Marrow Cells using Hydroxyapatite Microcarrier. *Tiss. Cult. Res. Commun.* 2007;26:125-131.
4. Sugo K, Nakayama M and Ogawa T, Japanese Encephalitis Virus Production using Hydroxyapatite Microcarrier. *Medicine and Biology.*2007;151(7):237-243

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Inspiration for Life Science

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