

# CryostaX

Single Freeze Plateable Cryopreserved Human Hepatocytes

## HP1000.HP+ Lot No. H1220

Cryopreserved Human Hepatocytes  
Human, Male, Individual

Assured Minimum Yield:  $5.0 \times 10^6$  cells per vial  
Viability: 90%

Yield and viability are based on experiments performed at XenoTech using XenoTech's thawing protocol and OptiThaw Hepatocyte Kit.

Enzyme	Marker Substrate Reaction	[S] ( $\mu$ M)	Rate (pmol/million cells/min)
CYP1A2	Phenacetin O-dealkylation	100	48.9 $\pm$ 3.7
CYP2A6	Coumarin 7-hydroxylation	50	5.47 $\pm$ 0.55
CYP2B6	Bupropion hydroxylation	500	19.0 $\pm$ 2.6
CYP2C8	Amodiaquine N-dealkylation	20	343 $\pm$ 51
CYP2C9	Diclofenac 4'-hydroxylation	100	296 $\pm$ 44
CYP2C19	S-Mephenytoin 4'-hydroxylation	400	31.7 $\pm$ 4.5
CYP2D6	Dextromethorphan O-demethylation	80	40.6 $\pm$ 5.4
CYP2E1	Chlorzoxazone 6-hydroxylation	500	255 $\pm$ 16
CYP3A4/5	Testosterone 6 $\beta$ -hydroxylation	250	162 $\pm$ 35
CYP3A4/5	Midazolam 1'-hydroxylation	30	17.5 $\pm$ 2.2
UGT	7-Hydroxycoumarin glucuronidation	100	540 $\pm$ 46
SULT	7-Hydroxycoumarin sulfonation	100	36.6 $\pm$ 2.6

Values for enzyme activities were determined at a single substrate concentration and are mean  $\pm$  standard deviation of three or more determinations.

To measure cytochrome P450 (CYP), UDP-glucuronosyl transferase (UGT) and sulfotransferase (SULT) activities, hepatocytes ( $1 \times 10^6$  /mL) in suspension were incubated in triplicate at  $37 \pm 2^\circ\text{C}$  for 30 minutes in OptiIncubate and marker substrate, at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards.

### Donor Information

<b>Gender:</b>	Male
<b>Age:</b>	28 years of age
<b>Race:</b>	Asian
<b>Cause of Death:</b>	Anoxia
<b>Antibody to Cytomegalovirus (CMV):</b>	Positive
All donors tested negative for Human Immunodeficiency Virus (HIV), Hepatitis B Surface Antigen (HBsAg), Hepatitis C Virus, and Rapid Plasma Reagin.	



## Store in liquid nitrogen, vapor phase

CAUTION: This sample should be considered as a potential biohazard and universal precautions should be followed. Intended for *in vitro* use only.

These data were generated by and are the property of XenoTech. These data are not to be reproduced, published or distributed without the express written consent of XenoTech.

Datasheet prepared 16 June 2021

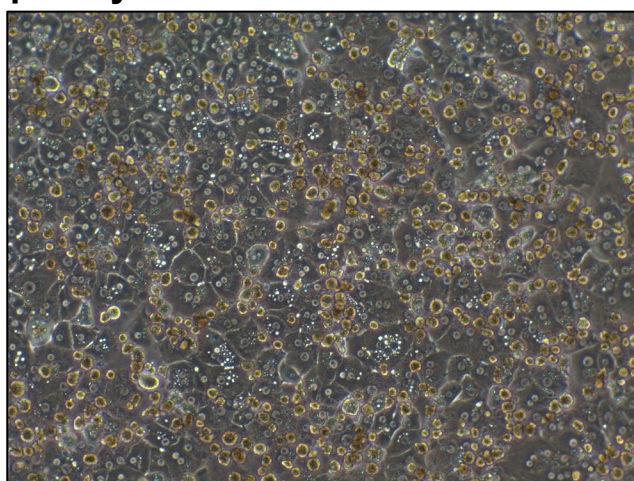
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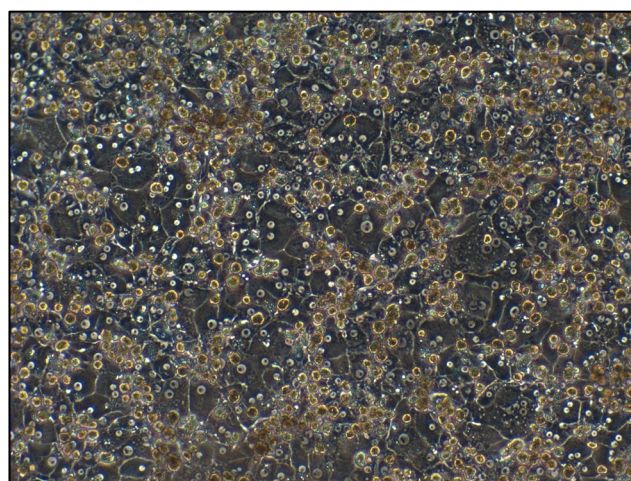
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### Hepatocyte Cell Culture



Photomicrograph (100x) of H1220 Day 2 of culture



Photomicrograph (100x) of H1220 incubation day

Plate Format	Recommended Seeding	
	Density (million cells/mL)	Recommended Seeding/ Feeding Volume Per Well
6-well format	1.6	1.7 mL
12-well format	1.6	650 $\mu$ L
24-well format	1.6	330 $\mu$ L
48-well format	0.75	200 $\mu$ L
96-well format	0.75	75 $\mu$ L

### Induction Data

Enzyme	Inducer	mRNA Fold Induction	Marker Substrate Reaction	Enzymatic Fold Induction
CYP1A2	Omeprazole (50 $\mu$ M)	128.1	Phenacetin O-dealkylation	59.5
CYP2B6	Phenobarbital (750 $\mu$ M)	7.3	Bupropion hydroxylation	6.8
CYP2B6	CITCO (100 nM)	7.9	Bupropion hydroxylation	6.3
CYP3A4	Rifampin (20 $\mu$ M)	7.1	Midazolam 1'-hydroxylation	8.2