

# Product Characterization Sheet

## HH1064

Human Hepatocytes, Catalog Number 82002



### Classification

Plateability	Suspension
Number of days plateable	N/A
Confluency	N/A
P450 Inducibility	N/A
Transporter activity	N/A
Number of donors	1

### Donor Demographics

Gender	Female
Age	18
Race	Caucasian
Cause of death	HT 2ND TO BLUNT INJURY
BMI	23.2
Smoking	Yes
Alcohol	Yes
Substance abuse	No
Medical history	
Infectious diseases	HBV-, HCV-, HIV-, CMV-

### Post-thaw Viability and Yield

Viability	89 %
Yield	5.3 million

**Characterization:** Hepatocytes were thawed using 37°C UCRM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, hepatocytes were re-suspended in UPCM™ and counted for viability and yield using the Trypan Blue exclusion method. Cells were plated in a hand-coated collagen 24-well plate at a 0.7 million cells per mL density, 0.5 mL per well, and allowed to attach 4-6 hours prior to a Matrigel® overlay.

### Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (µM)	Incubation Time (minutes)	Metabolite Quantified	Activity (pmol/minute/million cells)
CYP1A2	Phenacetin (100)	15	Acetaminophen	36.2
CYP2A6	Coumarin (50)	30	7-Hydroxycoumarin	9.1
CYP2B6	Bupropion (500)	15	Hydroxybupropion	1.6
CYP2C8	Paclitaxel (20)	15	6α-Hydroxypaclitaxel	0.8
CYP2C9	Diclofenac (25)	15	4-Hydroxydiclofenac	15.3
CYP2C19	S-Mephenytoin (250)	30	4-Hydroxymephenytoin	24.8
CYP2D6	Dextromethorphan (15)	15	Dextrorphan	2.6
CYP2E1	Chlorzoxazone (250)	15	6-Hydroxychlorzoxazone	15.6
CYP3A4	Midazolam (20)	10	1-Hydroxymidazolam	40.1
	Testosterone (200)	15	6β-Hydroxytestosterone	97.0
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin	20.5
UGT	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin glucuronide	292.17
Sulfotransferase	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin sulfate	20.73

**CYP450 Activity Assessment:** The hepatocytes were incubated at a cell density of 0.5 million cells/mL in a 48-well plate (125,000 hepatocytes/well) for the designated time durations with isoform-selective substrates. The metabolites were identified and analyzed using LC-MS/MS.

IVAL cell culture media and tissue culture plates used in this evaluation:

- Recovery of thawed hepatocytes - Cat. No. 81015 - UCRM™ Universal Cryopreservation Recovery Media, 50 mL tube
- Initial plating of hepatocytes - Cat. No. 81016 - UPCM™ Universal Primary Cell Plating Media, 50 mL tube
- Sandwich culture with 0.25 mg Matrigel® - Cat. No. 81018/81019 - HIM™ Hepatocyte Induction Media, 50 mL tube/500 mL bottle
- Suspension and incubation of hepatocytes - Cat. No. 81039/81040 - HQM™ Hepatocyte Incubation Media, 50 mL tube/500 mL bottle
- Collagen coated plates - Cat. No. 71006, 71008 - CellAffix™ 24-well and 96-well Collagen Hand Coated tissue culture plate, 5 plates per pack

To inquire about our products and services or for technical questions please contact:

- In Vitro ADMET Laboratories by phone at +1 (866) 458-1094 or +1 (410) 869-9037 or email at [info@invitroadmet.com](mailto:info@invitroadmet.com)