

Human Liver Microsomes

Female, Individual No. 470

0.5 mL at 20 mg protein / mL

Suspension medium: 250 mM sucrose

**Genotype, Specific Content and Activities <sup>a</sup>**
**Content / Rate**

CYP3A5 Allelic variant

CYP3A5\*1/\*3

Cytochrome P450

(nmol/mg protein)

0.419

Cytochrome b<sub>5</sub>

(nmol/mg protein)

0.374

NADPH-cytochrome c reductase

(nmol/mg protein/min)

174 ± 0

Enzyme	Marker Substrate Reaction	[S] (μM)	Rate (pmol/mg protein/min)
CYP1A2	Phenacetin O-dealkylation	80	387 ± 26
CYP2A6	Coumarin 7-hydroxylation	50	1560 ± 60
CYP2B6	Bupropion hydroxylation	500	1810 ± 90
CYP2C8	Amodiaquine N-dealkylation	20	2300 ± 50
CYP2C9	Diclofenac 4'-hydroxylation	100	2030 ± 250
CYP2C19	S-Mephenytoin 4'-hydroxylation	400	5.62 ± 0.72
CYP2D6	Dextromethorphan O-demethylation	80	87.5 ± 1.3
CYP2E1	Chlorzoxazone 6-hydroxylation	500	1730
CYP3A4/5	Testosterone 6β-hydroxylation	30	2960 ± 110
CYP3A4	Midazolam 1'-hydroxylation	250	553 ± 32
CYP4A11	Lauric acid 12-hydroxylation	30	1420 ± 20

Characterization is performed when the first lot of a product from a given subcellular fraction (e.g., S9) is prepared. Subsequent lots are subject to a verification test only. Values for enzyme activities were determined at a single substrate concentration and are mean ± standard deviation of three or more determinations.

To measure cytochrome P450 (CYP) activity, liver microsomes (50 μg/mL) were incubated in triplicate at 37 ± 1°C for 10 minutes in potassium phosphate buffer (50 mM, pH 7.4), containing MgCl<sub>2</sub> (3.0 mM), EDTA (1.0 mM), NADP (1.0 mM), glucose-6-phosphate (5.0 mM), glucose-6-phosphate dehydrogenase (1 Unit/mL) and marker substrate, at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards. FMO activity was measured under similar conditions except the protein concentration was 1 mg/mL and the buffer was 49 mM Tricine (pH 8.5)

Sample	Gender	Age (yrs)	Race	Cause of Death
H0470	Female	57	Caucasian	Anoxia

**Serology information**

- This donor tested positive for cytomegalovirus
- This donor tested negative for HIV, HbsAg, and HCV\*
- This donor tested negative for RPR\*\*

\* Antibody to Human Immunodeficiency Virus, Hepatitis B Surface Antigen, Antibody to Hepatitis C Virus, respectively.

\*\* Rapid Plasma Reagin.


**Store at -80°C**

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 08 March 2018