

Male Sprague-Dawley Rat Microsomes — Liver, Pooled, Frozen, 10 mg @ 20 mg/mL

**Product: M00001 | Lot: JHU**

**Storage: ≤ -70 °C**

**Protein & p450 Concentration**

| Parameter        | Specification                      | Result               |
|------------------|------------------------------------|----------------------|
| Protein          | 20—26 mg/mL                        | <b>25.1</b> mg/mL    |
| Total P450       | nmol/mg                            | <b>0.794</b> nmol/mg |
| Volume           | ≥ 0.5 mL                           | <b>0.50</b> mL       |
| Number of Donors | ≥ 3 male Sprague-Dawley rat donors | <b>216</b> donors    |

Protein and p450 values are average concentrations of samples from the beginning, middle, and end of the production run.

**Metabolic Activity**

| Enzyme         | Substrate                         | Conc. [μM] | Metabolite                  | Result**    |
|----------------|-----------------------------------|------------|-----------------------------|-------------|
| <b>ECOD</b>    | 7-Ethoxycoumarin O-deethylation   | 75         | 7-HC, 7-HCG, and 7-HCS*     | <b>220</b>  |
| <b>UGT</b>     | 7-Hydroxycoumarin glucuronidation | 30         | 7-HCG                       | <b>2385</b> |
| <b>CYP1A2</b>  | Phenacetin O-deethylation         | 15         | acetaminophen               | <b>57.5</b> |
| <b>CYP2A6</b>  | Coumarin 7-hydroxylation          | 8          | 7-HC, 7-HCG, and 7-HCS      | <b>0.00</b> |
| <b>CYP2C9</b>  | Tolbutamide methyl- hydroxylation | 150        | 4'-methylhydroxytolbutamide | <b>51.1</b> |
| <b>CYP2C19</b> | S-Mephenytoin 4'- hydroxylation   | 20         | 4'-hydroxymephenytoin       | <b>2.09</b> |
| <b>CYP2D6</b>  | Dextromethorphan O- demethylation | 8          | dextrorphan                 | <b>126</b>  |
| <b>CYP2E1</b>  | Chlorzoxazone 6-hydroxylation     | 100        | 6-hydroxychlorzoxazone      | <b>201</b>  |
| <b>CYP3A4</b>  | Testosterone 6β-hydroxylation     | 50         | 6β-hydroxytestosterone      | <b>365</b>  |
| <b>CYP3A4</b>  | Midazolam 1-hydroxylation         | 4          | 1-hydroxymidazolam          | <b>28.5</b> |

\*7-hydroxycoumarin (7-HC), 7-hydroxycoumarin glucuronide (7-HCG), 7-hydroxycoumarin sulfate (7-HCS)

\*\*Metabolite rate of formation is measured in pmol/min/mg

Metabolic assays are run in triplicate. Activity results analyzed by HPLC-UV or LC/MS/MS validated procedures. Metabolite formation for all enzymes is measured after a 30 minute incubation at 37°C, 5% CO<sub>2</sub> and a final protein concentration of 0.5 mg.

Results for this lot have been derived through validated testing methods and confirmed by Quality Assurance.

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