


R1081 / Lot No. 0310131

Sprague Dawley Rat Liver Microsomes
 β -Naphthoflavone & Phenobarbital-treated rats
 Male, Pool of 30
 0.5 mL at 20 mg protein / mL

Specific content and activities	Content / Rate
Cytochrome P450 (nmol/mg protein)	1.82
Cytochrome b ₅ (nmol/mg protein)	0.549
NADPH-cytochrome <i>c</i> reductase (nmol/mg protein/min)	231 \pm 9
7-ethoxyresorufin <i>O</i> -dealkylation (pmol/mg protein/min)	3750 \pm 150 ^a
7-pentoxoresorufin <i>O</i> -dealkylation (pmol/mg protein/min)	659 \pm 19 ^b

^a Fold induction: ~13-fold increase over control microsomes

^b Fold induction: ~35-fold increase over control microsomes

Background: Dual treatment of male rats with β -naphthoflavone and the peroxisome proliferator, phenobarbital, causes a marked induction (>10-fold) of liver microsomal CYP1A and CYP2B enzymes. This dual treatment produces a similar response as Aroclor 1254, a known mixed inducer. Liver microsomes from corn oil-treated rats (Cat. No. R1098) and saline-treated rats (Cat. No. 1073) were used as controls. The results confirm the anticipated induction of both CYP1A and CYP2B activity.

<u>Animal Information</u>			
Species:	Rat	Treatment:	β -Naphthoflavone (BNF) and Phenobarbital (PB)
Strain:	IGS Sprague Dawley	Source:	Sigma (BNF and PB)
Sex:	Male	Vehicle:	Corn oil (BNF) and Saline (PB)
Age:	~8 weeks	Concentration:	BNF = 20 mg/mL, PB = 16 mg/mL
Vendor:	Charles River, Raleigh, NC	Regimen:	BNF = 100 mg/kg body weight single injection on days 1-4, liver microsomes prepared on day 5 PB = 80 mg/kg body weight single injection on days 1-4, liver microsomes prepared on day 5
Animals were housed in and AAALAC-accredited facility and allowed to acclimate \geq seven days before use.			
Food:	Harlan Teklad Rodent Chow #8604 (<i>ad libitum</i>)		
Water:	Automatic watering system (<i>ad libitum</i>)		
Light/dark cycle:	6:00 am – 6:00 pm light, 6:00 pm – 6:00 am dark (12-hour light/dark)		
Temperature:	72°F \pm 3°F		
Humidity:	45-55%		
Bedding:	Cell-Sorb Plus (gypsum treated paper product), A&W Products, New Philadelphia, OH		
Cage:	Polycarbonate Shoebox Cage, conventional cage		



Store at -80°C

For in vitro use only

CAUTION: Although strict measures are taken to ensure that livers obtained from laboratory animals do not harbor infectious diseases, we recommend that all animal products be handled as potential biohazards and universal precautions be followed.

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DATA SHEET PREPARED 10/2/03