

The Caco-2 Cell Bioassay for Measurement of Food Iron Bioavailability

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Materials

Name	Company	Catalog Number	Comments
0.5 M HCl	Fisher Scientific	A508-4 Hydrochloric Acid TraceMetal Grade	
18 megaohm water			Also known as distilled, deionized water
3,3',5-Triiodo-L-thyronine sodium salt	Sigma Aldrich Co	T6397	
6-well plates	Costar	3506	Use for bioassay experiments
ascorbic acid	Sigma Aldrich Co	A0278	
bile extract	Sigma Aldrich Co	B8631	
Caco-2 cells	American Type Culture Collection	HTB-37	HTB-37 is a common variety.
Cell culture flasks T225	Falcon	353138	
Cell culture flasks T25	Corning	430639	
Cell culture flasks T75	Corning	430641U	
Chelex-100	Bio-Rad Laboratories Inc	142832	Known as the weak cation exchange resin in the protocol
collagen	Corning	354236	
dialysis membrane	Spectrum Laboratories	Spectra/Por 7 Pretreated RC Dialysis Tubing 15,000 MWCO	Spectra/Por 7 Pretreated RC Dialysis Tubing 15,000 MWCO
Dulbecco's Modified Eagle's Medium	Gibco	12100046	DMEM
epidermal growth factor	Sigma Aldrich Co	E4127-5X.1MG	
Ferritin ELISA Assay Kit	Eagle Biosciences	FRR31-K01	
fetal bovine serum	R&D Systems	S12450	Optima
HEPES	Sigma Aldrich Co	H3375	
Hydrocortisone-Water Soluble	Sigma Aldrich Co	H0396	
insert ring	Corning Costar	not sold	Transwell, for 6 well plate, without membrane
insulin	Sigma Aldrich Co	I2643	
KCl	Sigma Aldrich Co	P9333	
large column	VWR International	KT420400-1530	
Minimum Essential Medium	Gibco	41500034	MEM
NaCl	Fisher Scientific	S271	

pancreatin	Sigma Aldrich Co	P1750	
PIPES disodium salt	Sigma Aldrich Co	Piperazine-1,4-bis(2-ethanesulfonic acid) disodium salt P3768	
porcine pepsin	Sigma Aldrich Co	P6887 or (P7012-25G Sigma	
protein assay kit	Bio-Rad Laboratories Inc	Bio-Rad DC protein assay kit 500-0116	Measurement of Caco-2 cell protein
silicone o rings	Web Seal, Inc Rochester NY	2-215S500	
sodium bicarbonate	Fisher Scientific	S233	
Sodium selenite	Sigma Aldrich Co	S5261	
ZellShield	Minerva Biolabs	13-0050	Use at 1% as antibiotic/antimycotic ordered through Thomas Scientific