


Brand :	FOCUS INDUSTRIES	<p style="text-align: center;">Contact for Custom Color and Thickness Orders</p> 
Name:	4mi Nitrile Exam Glove (Blue)	
Description:	4mil, PF,TXT, Nitrile	
Color:	BLUE	
Packaging	Focus Industries	
Carton Material :	3-layer yellow cardboard	
Carton Size(mm) :	365×250×260	
Box Material :	450g duplex paperboard	
Box Size(mm) :	248×121×70	
boxes/carton	10	
pcs/box	100	
pcs/carton	1000	

Item	Specifications		ASTM D6319/D36978	
Length (mm)	240~260		XS/S≥220, M/L/XL≥230	
Palm Width (mm)	XS	N/A	XS	70±10
	S	86±4	S	80±10
	M	95±4	M	95±10
	L	107±4	L	110±10
	XL	114±4	XL	120±10
	XXL	N/A	XXL	N/A
	XXXL	N/A	XXXL	N/A
Single Thickness (mm) Single Thickness (mil)	Finger	0.12±0.025 mm 4.7±1mil	Finger	≥0.05
	Palm	0.10±0.02mm 4±0.8mil	Palm	≥0.05
	Cuff	0.06±0.02 mm 2.5±0.8mil	Cuff	N/A
Weight (g)	XS	N/A	XS	N/A
	S	4.0±0.4	S	N/A
	M	4.5±0.4	M	N/A
	L	5.0±0.4	L	N/A
	XL	5.5±0.4	XL	N/A
	XXL	N/A	XXL	N/A
	XXXL	N/A	XXXL	N/A
Tensile Strength (MPa)	Before Aging	≥14	Before Aging	≥14
	After Aging	≥14	After Aging	≥14
Elasticity/Elongation (%)	Before Aging	≥500	Before Aging	≥500
	After Aging	≥400	After Aging	≥400
Powder Content (mg/pcs)	≤2.0		≤2.0	
Content(µg/dm ²)	N/A		N/A	

Notes & Inspection Level	Formulation list:	
1. Functional test(leak test)AQL1.5, sample per ISO2859	NBR	ZnO
2. Visual defects,AQL is "AND",2.5,sample per ISO2859-1	ZDC/BZ	Blue Pigment
3. Dimensional inspection sample 20pcs per size, AQL4.0	S	
4. Physical Property Testing sample 13 pcs per size, AQL4	KOH	
5. Packing per customer's request	TiO2	

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March 28, 2010

• **TEST REPORT** •


PN 87901

CHEMICAL ANALYTICAL SERVICES

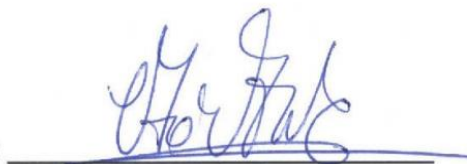
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March 28, 2010

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SUBJECT: Permeation testing per ASTM D 6978-05 on sample submitted by the above company.

RECEIVED: Glove sample identified as Pearlescent Nitrile Exam Gloves (Blue), Code: SH/091021151.

TESTING CHEMOTHERAPY DRUGS

Table 1. List of the Testing Chemotherapy Drugs, Sources, and Expiration Dates

TESTING CHEMOTHERAPY DRUGS	CHEMICAL SOURCE
Fluorouracil	APP; Lot# 204836; Expiration 01/2011
Etoposide (Toposar)	Teva; Lot# 31303976B; Expiration 9/2011
Cyclophosphamide (Cytoxan)	Sigma, Lot#079K1569; Expiration 01/2012
Carmustine (BCNU)	Ben Venue; Lot# 9C4211A; Expiration 3/2012
Thiotepa	USP; Lot# I; Expiration 12/2011
Paclitaxel (Taxol)	Parenta; Lot# 92198504; Exp. 01/2012
Doxorubicin Hydrochloride	Teva; Lot#31308631B; Expiration 08/2011
Dacarbazine (DTIC)	Hospira; Lot# 31301352B; Expiration 03/2011
Cisplatin	Teva; Lot# 09H28MA; Expiration 02/2011

COLLECTION MEDIA

The collection media which were selected are listed in Table 2.

Table 2. Collection Media for Testing Chemotherapy Drugs

TEST CHEMICAL AND CONCENTRATION	COLLECTION MEDIUM
Fluorouracil, 50.0 mg/ml (50,000 ppm)	9.20 pH Sodium Hydroxide Solution
Etoposide (Toposar), 20.0 mg/ml (20,000 ppm)	Distilled Water
Cyclophosphamide (Cytoxan), 20.0 mg/ml (20,000ppm)	Distilled Water
Carmustine (BCNU), 3.3 mg/ml (3,300 ppm)	10% Ethanol Aqueous Solution
Thiotepa, 10.0 mg/ml (10,000 ppm)	Distilled Water
Paclitaxel (Taxol), 6.0 mg/ml (6,000 ppm)	30% Methanol Aqueous Solution
Doxorubicin Hydrochloride, 2.0 mg/ml (2,000 ppm)	Distilled Water
Dacarbazine (DTIC), 10.0 mg/ml (10,000 ppm)	Distilled Water
Cisplatin, 1.0 mg/ml (1,000 ppm)	Distilled Water

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TESTING CONDITIONS

Standard Test Method Used:	ASTM D 6978-05
Deviation From Standard Test Method:	Used 1" Permeation Cell
Analytical Method:	UV/VIS Spectrometry
Testing Temperature:	35.0°C ± 2.0
Collection System:	Closed Loop
Specimen Area Exposed:	5.067 cm ²
Selected Data Points:	25/test
Number of Specimens Tested:	3/test
Location Sampled From:	Cuff area
Comments/Other Conditions:	Magnetic stir bar was used in the sampling chamber

DETECTION METHOD OF CHEMICAL PERMEATION; UV/VIS ABSORPTION SPECTROMETRY

Instrument: Perkin Elmer UV/VIS Spectrometer Lambda 25

UV/VIS Absorption Spectrometry was used to measure the absorbance of test chemicals which permeated through the specimens into the collection medium. The collection medium was circulated in a closed loop at 11 ml/minute of flow rate through the testing period. Data collection was performed according to the programmed schedule by means of UV Winlab software from the Perkin Elmer Corporation. The list of the characteristic wavelengths is shown below.

Table 3. Characteristic Wavelengths used in UV/VIS Absorption Spectrometry

TESTING CHEMOTHERAPY DRUGS	WAVELENGTH (nm)
Fluorouracil	269
Etoposide (Toposar)	205
Cyclophosphamide (Cytosan)	200
Carmustine (BCNU)	229
Thiotepa	199
Paclitaxel (Taxol)	231
Doxorubicin Hydrochloride	232
Dacarbazine (DTIC)	320
Cisplatin	199

SAMPLE CHARACTERISTICS

Table 4. Thickness characteristics for the tested specimens on: Glove sample identified as Pearlescent Nitrile Exam Gloves (Blue), Code: SH/091021151.

Testing Chemotherapy Drugs	Thickness (mm)			Average (mm)	Weight/Unit Area (g/m ²)
	#1	#2	#3		
Fluorouracil	0.104	0.106	0.094	0.101	86.5
Etoposide (Toposar)	0.093	0.102	0.103	0.099	86.5
Cyclophosphamide (Cytosan)	0.100	0.095	0.094	0.096	86.5
Carmustine (BCNU)	0.101	0.102	0.098	0.100	86.5
Thiotepa	0.096	0.102	0.101	0.100	86.5
Paclitaxel (Taxol)	0.104	0.106	0.103	0.104	86.5
Doxorubicin Hydrochloride	0.094	0.098	0.100	0.097	86.5
Dacarbazine (DTIC)	0.102	0.104	0.094	0.100	86.5
Cisplatin	0.096	0.095	0.106	0.099	86.5

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RESULTS

Table 5. Permeation Test Results on: Glove sample identified as Pearlescent Nitrile Exam Gloves (Blue), Code: SH/091021151.

TEST CHEMOTHERAPY DRUG AND CONCENTRATION	AVERAGE BREAKTHROUGH DETECTION TIME (Specimen1/2/3) (Minutes)	AVERAGE STEADY STATE PERM. RATE (Specimen1/2/3) ($\mu\text{g}/\text{cm}^2/\text{minute}$)	OTHER OBSERVATIONS
Fluorouracil, 50.0 mg/ml (50,000 ppm)	No breakthrough up to 240 min.	N/A	Slight swelling and no degradation
Etoposide (Toposar), 20.0 mg/ml (20,000 ppm)	No breakthrough up to 240 min.	N/A	Moderate swelling and no degradation
Cyclophosphamide (Cytoxan), 20.0 mg/ml (20,000ppm)	No breakthrough up to 240 min.	N/A	Slight swelling and no degradation
Carmustine (BCNU), 3.3 mg/ml (3,300 ppm)	2.10 (1.90,2.83,1.56)	0.839 (0.843,1.01,0.665)	Moderate swelling and no degradation
Thiotepa, 10.0 mg/ml (10,000 ppm)	27.17 (39.97,11.19,30.35)	1.29 (2.09,0.94,0.85)	Slight swelling and no degradation
Paclitaxel (Taxol), 6.0 mg/ml (6,000 ppm)	No breakthrough up to 240 min.	N/A	Moderate swelling and no degradation
Doxorubicin Hydrochloride, 2.0 mg/ml (2,000 ppm)	No breakthrough up to 240 min.	N/A	Slight swelling and no degradation
Dacarbazine (DTIC), 10.0 mg/ml (10,000 ppm)	No breakthrough up to 240 min.	N/A	Slight swelling and no degradation
Cisplatin, 1.0 mg/ml (1,000 ppm)	No breakthrough up to 240 min.	N/A	Slight swelling and no degradation



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