

**National Institute of Justice (NIJ)**

Approved Test Laboratory  
For Personal Body Armor

Expiration Date:

April 30, 2022

**National Technical Systems**

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NVLAP LAB CODE: 200818-0

Approved Signatory: Jake Crawford

**HARD ARMOR STAND-ALONE PLATE:**

Date Received: 1/6/2020  
Via: DHL  
Returned Via: DHL

**P-BFS TEST**

Record No.: VTG20003-1  
Test Date: 3/6/2020  
Customer: Merc Tactical Gear Co., Ltd.

**Test Conditions**

Temperature: 21.1 °C  
Humidity: 55 %  
Clay Block No.: 14  
Clay Block Size: 24" x 24" x 5.5"  
Clay Temp.: 36.5 °C  
Drop Average: 18.32 mm  
Test Standard: IAW Modified / Abbreviated NIJ 0101.06, July 2008  
Threat Level: III  
Conditioning: Ambient / Dry

**Range 3**

Muzzle to Screen 1: 11.98 m  
Screen 1 - 4: 1.52 m  
Screen 4 - Target: 1.74 m  
Midpoint to Target: 2.50 m  
Target to Witness: 0 m  
Barrel Length: 66.04 cm

Sample Tested	Shot / Projectile Description				Chronograph		Test Results	
	Shot No.	Shot Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME sx-5	VELOCITY m/s	Perforation BFS (mm)
<b>Plate</b> Manufacturer: VT Garment Co. Ltd Model No.: GMGB3+MSSHMUB01M Lot No.: N/A Size (cm): 24.5 x 30.5 Curve / Cut: Single-Curved / Shooter's Cut DoM: N/A Weight (kg): 2.136 Protection Level: N/A	1	Top Left	0°	7.62mm NATO	147 / FMJ (M80)	180.7	843.4	20.21
	2	Bottom Right	0°			179.7	848.1	19.96
	3	Top Right	0°			179.8	847.6	24.93
	4	Middle Right	0°			179.7	848.1	29.97
	5	Middle Left	0°			181.5	839.7	25.41
	6	Bottom Left	0°			180.3	845.3	24.42
<b>Plate Carrier</b> Manufacturer: Merc Tactical Gear Model No.: ETO Plate Carrier Lot No.: N/A Size (cm): N/A DoM: N/A Weight (kg): 0.367 Protection Level: N/A								

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**Test Remarks/Notes:**

- Plate tested non-planar (with clay build-up/mound)
- Plate tested ICW plate carrier.
- Customer requested BFS to be measured for ALL Shots

**Test Round Description:**

Test Round: 7.62mm NATO, 147 gr. (9.6g) FMJ (U.S. Military M80)  
Test Velocity: 847.4 m/s +/- 9.1 (2780 +/- 30 ft/s)

**Shot Spacing Requirements:**

- Shot Pattern: NIJ 0101.06 6-Shot Die Pattern
- Shot-to-Edge: 2.0" Minimum
- Shot-to-Shot: 2.0" Minimum

**Sample Description:**

- Customer Proprietary

Project Manager: Zerger  
Range Tech(s): Nguyen