

Customer:  
OROS Research

EA Sample ID: 26EA0713-028  
Sample Name: MOTS-C 20mg  
Sample Type: Powder  
Batch/Lot: OR-LPMOTS20-726-B2

Date Received:  
07/14/2026  
Date Completed:  
07/26/2026



ETHOS  
ANALYTICS

# CERTIFICATE OF ANALYSIS

## Summary of Results

| Analysis Type        | Method         | Date Tested | Status   |
|----------------------|----------------|-------------|----------|
| MOTS-c               | HPLC           | 07/17/2026  | Complete |
| Bacterial Endotoxins | USP <85>       | 07/20/2026  | Complete |
| Residual Solvents    | USP <467>      | 07/20/2026  | Complete |
| Fentanyl             | USP <2251>     | 07/26/2026  | Complete |
| Heavy Metals         | ICP-MS         | 07/16/2026  | Pass     |
| Microbiological      | Petrifilm/qPCR | 07/17/2026  | Pass     |



Serving Size: N/A

## Label Claim Profile

| Analyte                                                                                                                 | Result                | Specification | LOD                        |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|----------------------------|
| MOTS-c                                                                                                                  | Vial 1 = 20.36mg/vial | 20mg/vial     | 0.1%                       |
| MOTS-c                                                                                                                  | Vial 2 = 20.22mg/vial | 20mg/vial     | 0.1%                       |
| Average                                                                                                                 | 20.29 mg/vial         | 20mg/vial     | N/A                        |
| Identity of the analyte was confirmed by retention time concordance with a certified reference standard, per USP <621>. |                       |               |                            |
| Chromatographic Purity Vial 1                                                                                           | >99%                  | >99%          | 0.1%                       |
| Chromatographic Purity Vial 2                                                                                           | >99%                  | >99%          | 0.1%                       |
| Bacterial Endotoxins<br>(Gel-Clot: 1:10 Dilution)                                                                       | <1.25 EU/ml           | <5 EU/ml      | $\lambda =$<br>0.125 EU/mL |
| Fentanyl                                                                                                                | Vial 1 = Not Detected | <LOD          | 10ppm                      |
| Fentanyl                                                                                                                | Vial 2 = Not Detected | <LOD          | 10ppm                      |
| Acetonitrile                                                                                                            | <LOD                  | <410ppm       | 300ppm                     |
| Methanol                                                                                                                | <LOD                  | <3000ppm      | 500ppm                     |
| DMF (N,N-Dimethylformamide)                                                                                             | <LOD                  | <880ppm       | 300ppm                     |
| Dichloromethane (Methylene Chloride)                                                                                    | <LOD                  | <600ppm       | 300ppm                     |
| Diethyl Ether (Ethyl Ether)                                                                                             | <LOD                  | <5000ppm      | 500ppm                     |
| Isopropanol (2-Propanol)                                                                                                | <LOD                  | <5000ppm      | 500ppm                     |
| Ethanol                                                                                                                 | <LOD                  | <5000ppm      | 500ppm                     |
| THF (Tetrahydrofuran)                                                                                                   | <LOD                  | <720ppm       | 300ppm                     |
| TFA (Trifluoroacetic acid)                                                                                              | <LOD                  | Report Only   | 500ppm                     |

NOTES: Injectable peptides may include acceptable salts, sugars, or buffering agents added to improve solubility and stability. These excipients are non-chromophoric, typically not detected by HPLC, and are not considered impurities. Two vials were independently tested to evaluate batch consistency and vial-to-vial variability.

LOD = LIMIT OF DETECTION; LOQ = LIMIT OF QUANTIFICATION



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Noel Samsum  
Laboratory Director  
26-Jul-2026

The sample analyzed was inspected and is free from visual mold, mildew, and foreign matter. The testing procedures, equipment calibration, and maintenance are all in accordance with ISO/IEC 17025:2017 standards. The presented report is only applicable to the sample specified above and may not be applied to any similar or identical products. Reports are prohibited from being reproduced with alterations of any kind.

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### Heavy Metal Analysis (USP <233>)

| Analyte | Result<br>(mcg/vial) | LOQ (ppm) | LOD (ppm) | Limit<br>(mcg/day) | Pass/Fail |
|---------|----------------------|-----------|-----------|--------------------|-----------|
| Arsenic | <LOQ                 | 0.010     | 0.005     | 0.5                | Pass      |
| Cadmium | <LOQ                 | 0.010     | 0.005     | 0.1                | Pass      |
| Lead    | 0.009                | 0.010     | 0.005     | 0.5                | Pass      |
| Mercury | <LOQ                 | 0.010     | 0.005     | 0.1                | Pass      |

### Microbiological Analysis (USP <61>, USP <62>)

| Microbe                              | Result      | Limit       | Pass/Fail |
|--------------------------------------|-------------|-------------|-----------|
| Total Aerobic Plate                  | <10 CFU/g   | <100 CFU/g  | Pass      |
| Coliform                             | <10 CFU/g   | <10 CFU/g   | Pass      |
| Bile-Tolerant Gram-Negative Bacteria | <10 CFU/g   | <10 CFU/g   | Pass      |
| Yeast and Mold                       | <10 CFU/g   | <10 CFU/g   | Pass      |
| Escherichia Coli                     | Negative/1g | Negative/1g | Pass      |
| Salmonella                           | Negative/1g | Negative/1g | Pass      |
| Staphylococcus Aureus                | Negative/1g | Negative/1g | Pass      |

#### NOTES:

CFU = Colony Forming Unit  
NS = Not Specified  
NT = Not Tested

LOQ = Limit of Quantification  
LOD = Limit of Detection



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