



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at [wvOASIS.gov](http://wvOASIS.gov). As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at [WVPurchasing.gov](http://WVPurchasing.gov) with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header 3

List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 568821

SO Doc Code: CRFQ

Procurement Type: Central Purchase Order

SO Dept: 0803

Vendor ID:

SO Doc ID: DOT1900000104

Legal Name: VERDER SCIENTIFIC INC

Published Date: 4/23/19

Alias/DBA:

Close Date: 5/8/19

Total Bid: \$134,130.00

Close Time: 13:30

Response Date:

Status: Closed

Response Time:

Solicitation Description:

Total of Header Attachments: 3

Total of All Attachments: 3



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 568821  
**Solicitation Description :** ASPHALT MIXTURE TESTING EQUIPMENT (7719008)  
**Proc Type :** Central Purchase Order

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-05-08 13:30:00	SR 0803 ESR04231900000004893	1

<b>VENDOR</b>
000000162202 VERDER SCIENTIFIC INC

**Solicitation Number:** CRFQ 0803 DOT1900000104

**Total Bid :** \$134,130.00      **Response Date:** 2019-04-24      **Response Time:** 08:24:43

**Comments:** Verder Scientific Inc. would like to offer a flat 15% discount regardless of the payment terms.

**FOR INFORMATION CONTACT THE BUYER**  
 Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

<b>Signature on File</b>	<b>FEIN #</b>	<b>DATE</b>
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	AUTOMATIC VACUUM SEALING SYSTEM	2.00000	EA		

Comm Code	Manufacturer	Specification	Model #
41104500			

Extended Description :	AUTOMATIC VACUUM SEALING SYSTEM
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	AUTOMATIC VACUUM DRYING SYSTEM	7.00000	EA		

Comm Code	Manufacturer	Specification	Model #
41102400			

Extended Description :	AUTOMATIC VACUUM DRYING SYSTEM
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	ASPHALT IGNITION FURNACE SYSTEMS	10.00000	EA	\$11,322.000000	\$113,220.00

Comm Code	Manufacturer	Specification	Model #
41104500			

Extended Description :	ASPHALT IGNITION FURNACE SYSTEMS
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**Comments:** Unit comes complete with appropriate accessories for operation (PPE sold separately). Additional accessories for normal use.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	ASPHALT IGNITION FURNACE ACCESSORY KITS	10.00000	EA	\$2,091.000000	\$20,910.00

Comm Code	Manufacturer	Specification	Model #
41104500			

Extended Description :	ASPHALT IGNITION OVEN ACCESSORY KITS
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**Comments:** Additional optional accesories, not required for normal use.



QUOTE NUMBER: 1903828  
 CUSTOMER P.O.: INQUIRY  
 ORDER DATE: 4/23/2019  
 CONTACT ID: MH

**CUSTOMER ACCT#:** PROSP

West Virginia DOT  
 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

TERMS  
 NO TERMS

**Ship To:**

West Virginia DOT  
 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

SHIP VIA: FEDEX FREIGHT  
 INCOTERMS: EXW Newtown, PA  
 ATTN.: Crystal Rink

LEAD TIME Please allow 6-8 weeks

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
00372-3-4000 ABA FLOOR STAND ABA Floor stand	EACH	10	530.00	C	15%	450.50	4,505.00
30-170-000-0040 HIGH TEMP SAFETY GLOVES High temperature safety gloves	EACH	10	90.00	C	15%	76.50	765.00
ABA-FACE-SHIELD ABA FACE SHIELD	EACH	10	150.00	C	15%	127.50	1,275.00

Continued



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 ATTN.: Crystal Rink

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
ABA00336EXHOPT ABA EXHAUST PIPE/CLAMPS Flexible metal extraction pipe and clamps (3m)	EACH	10	420.00	C	15%	357.00	3,570.00
00336-3-4003 COOLING STAND (FLOOR) ABA 7/35	EACH	10	350.00	C	15%	297.50	2,975.00
00336-3-4001 BENCH-MOUNT COOLING TRAY ABA 7/35	EACH	10	130.00	C	15%	110.50	1,105.00

Continued



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SHIP VIA: FEDEX FREIGHT  
 INCOTERMS: EXW Newtown, PA  
 ATTN.: Crystal Rink

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
00336-3-1019 ADDITIONAL BASKET SET FOR ABA 7/35B INCLUDES: 2 BASKETS, 1 CATCH TRAY, 1 BASKET COVER, 2 LOCKING RODS	EACH	10	380.00	C	15%	323.00	3,230.00
00336-3-1030 LOADING HANDLE - AAF	EACH	10	100.00	C	15%	85.00	850.00
00336-3-2042-SP ADDTL SAFETY COVER Additional hot sample basket safety cover	EACH	10	310.00	C	15%	263.50	2,635.00

Freight Estimated  
 Freight charges can be applied as prepay & add OR collect  
 (with account number provided).  
 Purchase orders must be sent to [info-us@verder-scientific.com](mailto:info-us@verder-scientific.com)  
 for prompt processing and to avoid any delays.



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LEAD TIME Please allow 6-8 weeks

**Ship To:**

West Virginia DOT  
 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

SHIP VIA: FEDEX FREIGHT  
 INCOTERMS: EXW Newtown, PA  
 ATTN.: Crystal Rink

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
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\* Our general terms and conditions apply.  
 Validity of prices: December 31, 2019

Net Order: 20,910.00  
 Freight: 500.00  
**Order Total:** 21,410.00



# ABA – Asphalt Binder Analyser

ABA – Asphalt Binder Analyser



**LCD  
touchscreen  
control**

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**Afterburner for  
cleaned waste  
gases**

**Asphalt binder content affects hot mix asphalt (HMA)**

**mixture performance in the areas of strength, durability,**

**fatigue life, ravelling, rutting and moisture damage.**

# ABA – Asphalt Binder Analyser

**The ABA 7/35B is designed to measure the asphalt binder content of hot mix asphalt (HMA) using loss on ignition, in accordance with AASHTO T 308-10, ASTM D6307-10 & BSEN 12697-39:2012.**

The integral microprocessor controlled weighing and calculation system is configurable to allow variations to the standard test method. Test result reports are available in both printed and software format. The high temperature afterburner minimises the production of noxious waste fumes. Supplied complete with 2 sets of sample baskets

## Standard features

- Designed to measure asphalt binder content by loss on ignition
- Avoids the health, environmental & waste management issues & expense associated with the older solvent extraction methods
- Reduced emissions due to high temperature afterburner
- Controlled via a multi-lingual touchscreen interface
- Supplied as standard with English, Spanish, French, Chinese, Italian & Russian language display. Other languages are available to order
- Automatic calculation of final sample weight & binder % result
- Adjustable aggregate correction factor
- Precise weight measurements displayed to 0.1 g resolution
- Has the capacity for large sample sizes for more accurate results (maximum sample weight 4.5 kg)
- Average test times from 20 mins for 6 mm aggregates, to 45 mins for 40 mm aggregates
- Permanent (dot-matrix) printed reports
- USB data output compatible with most spread sheets
- Easy naming, storage & recall of recipes that can be transferred between ABA 7/35B units
- Simplified menu structure with secure 'Supervisor' & 'Operator' settings



ABA 7/35B  
(mounted on  
optional floor stand)

- 1 LCD touchscreen control
- 2 Integral fan assisted high-temperature afterburner greatly reduces emissions
- 3 Safety circuits warning lamps
- 4 Rapid heating main chamber with robust 1 mm Ø wire elements
- 5 Integral balance measures loss on ignition to 0.1 g resolution
- 6 Automatic capture of initial weight data is possible from an external balance by RS232 cable
- 7 Optional flat pack floor stand
- 8 Control panel with:
  - Instrument on/off switch
  - Printer on/off switch
  - Safety circuits test switch
  - Afterburner heating lamp
  - Main chamber heater lamps
  - USB data output
- 9 Printer

Hot mix asphalt (HMA) that has too much asphalt binder may experience problems such as, reduced skid resistance and reduced resistance to permanent deformation, eg rutting.

HMA that has too little asphalt binder may experience reduced fatigue resistance and problems with stripping.

# Safe solvent-free binder calculation

## Safe design

- Failsafe door interlock keeps the door locked during a test even in the event of a power failure, protecting the operator from the burning test sample
- Electrical supply is isolated from the heating elements when the door is opened
- Afterburner temperature is controlled independently from the main chamber
- Automatic capture and calculation of weight loss values minimises human errors
- Double skin construction ensures safe external surface temperatures
- Corrosion resistant, stoved epoxy finish for a long working life
- Rapid heat up rate enables the ABA 7/35B to be switched off between tests, reducing power consumption
- Low thermal mass insulation & efficient element designs means that the ABA 7/35B is ready to use in approximately 30 minutes
- Internal balance is calibrated in position using a 5 kg standard calibration mass

## Options (specify these at time of order)

- Floor stand
- Sample cooling stand
- Additional sample basket set
- Metal waste gas extraction pipe
- Touchscreen protection film
- Gloves
- Face shield
- Factory fitted thermocouple access port, if temperature calibration is to be carried out



Sample basket set, with loading handle attached, spare paper printer rolls and (red) sample basket cooling cover



3 level sample basket cooling stand, gloves and face shield

## Technical data

Model	Max temp (°C)	Dimensions: Internal H x W x D (mm)	Dimensions: External H x W x D (mm)	Max power (W)	Thermocouple type	Weight (kg)
ABA 7/35B	750	220 x 350 x 450	980 x 600 x 775 (Bench-top or optional stand)	8000	K	120

**i** Please note:

- The oven is rated at 8 kW for operation on 208/240 V, 50/60 Hz, three or single phase. Please state mains supply when ordering
- The oven holding power is approximately 3 kW



```
21/02/2012 16:05:54
***** TEST STARTED *****
Recipe: ASPHALT TEST I
```

```
21/02/2012 16:13:55
Recipe: ASPHALT TEST I
Elapsed time (hh:mm:ss):
00:08:01
Main chamber temperature:
693 Deg C
Sample Weight: 1146.1g
Total Weight Loss: 52g
Total % Weight Loss: 4.3%
```

\*\*\* END OF TEST REPORT \*\*\*

```
Recipe: ASPHALT TEST I
21/02/2012 16:34:28
Elapsed time (hh:mm:ss):
00:28:32
Calibration format:
Asphalt
Recipe type: Standard
Recipe calibration factor:
0.50%
Constant weight delay: 10
minutes
Constant weight time: 3
minutes
Constant mass limit: 1g
(used)
Min % weight 0% (n/a)
Temperature setpoint: 520
Deg C
Main chamber temperature:
558.7 Deg C
Sample Weight: 1104.7g
Total Weight Loss:
93.4g
Total % Weight Loss: 7.8%
```

```
-----
ASPHALT
BINDER 7.3%
CONTENT
-----
```

```
Mix ID:
-----
```

```
Sample No:
-----
```

```
Binder Spec:
-----
```

```
Operator:
-----
```

Example of test report print out

# Ignition test principles

Flexible enough for most methods derived from the ASTM, AASHTO and BS/EN loss on ignition standards, the ABA 7/35B replaces the older solvent based test methods.

Calibration factors are first calculated, using either pre-determined asphalt mixes as a benchmark or aggregate only samples in order to correct for small amounts of volatile components present within the aggregate itself. Also the effect of airflow passing through the chamber is tested and adjusted by a lift correction factor.

Sample size is based on the aggregates' nominal particle size, which is collected using standard sampling methods. Its weight before ignition is measured on a balance outside the ABA 7/35B furnace. The appropriate test recipe is entered or selected from the library, the sample is then loaded into the preheated ABA 7/35B and the test is started.

For operator safety the ABA 7/35B's door remains locked until the test is completed. The end point is automatically detected by the ABA 7/35B using absolute or percentage weight changes, whichever is required by the standard method used. The test end-point is signalled by an audible alarm and the results are automatically printed.



Loading sample basket



Easy to use LCD touchscreen to set up recipes





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 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

TERMS  
 NO TERMS

LEAD TIME Please allow 6-8 weeks

**Ship To:**

West Virginia DOT  
 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

SHIP VIA: FEDEX FREIGHT  
 INCOTERMS: EXW Newtown, PA  
 ATTN.: Crystal Rink

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
ABA0735B-230SN ABA7/35 220-240V	EACH	10	13,320.00	C	15%	11,322.00	113,220.00

Standard Features:

- Designed to measure asphalt binder content by loss on ignition
- Avoids the health, environmental & waste management issues & expense associated with the older solvent extraction methods
- Reduced emissions due to high temperature afterburner
- Controlled via a multi-lingual touchscreen interface
- Automatic calculation of final sample weight & binder % result
- Adjustable aggregate correction factor
- Precise weight measurements displayed to 0.1 g resolution
- Has the capacity for large sample sizes for more accurate results (maximum sample is 4.5 kg)
- Average test times from 20 mins for 6 mm aggregates, to 45 mins for 40 mm aggregates
- Permanent (dot-matrix) printed reports
- USB data output compatible with most spread sheets
- Easy naming, storage & recall of recipes that can be transferred between ABA 7/35B units
- Simplified menu structure with secure 'Supervisor' & 'Operator' settings
- Metal waste gas extraction pipe
- Factory fitted thermocouple access port, if temperature calibration is to be carried out

Technical Specifications:

- Max temp (°C): 750
- Dimensions: Internal H x W x D (mm) - 220 x 350 x 450
- Dimensions: External H x W x D (mm) - 980 x 600 x 775
- Configuration: Bench-top
- Thermocouple: type K

Continued



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 190 DRY BRANCH DR  
 CHARLESTON, WV 25306 United States

TERMS  
 NO TERMS

**Ship To:**

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SHIP VIA: FEDEX FREIGHT  
 INCOTERMS: EXW Newtown, PA  
 ATTN.: Crystal Rink

LEAD TIME Please allow 6-8 weeks

Item Number	Unit	Qty	List Price	Price Level	Disc %	Price	Amount
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- Weight (kg): 120  
 - Max power (W): 8000

\*\*Power cord not included\*\*

Freight Estimated  
 Freight charges can be applied as prepay & add OR collect  
 (with account number provided).  
 Purchase orders must be sent to [info-us@verder-scientific.com](mailto:info-us@verder-scientific.com)  
 for prompt processing and to avoid any delays.

\* Our general terms and conditions apply.  
 Validity of prices: December 31, 2019

Net Order: 113,220.00  
 Freight: 2,000.00  
**Order Total:** 115,220.00