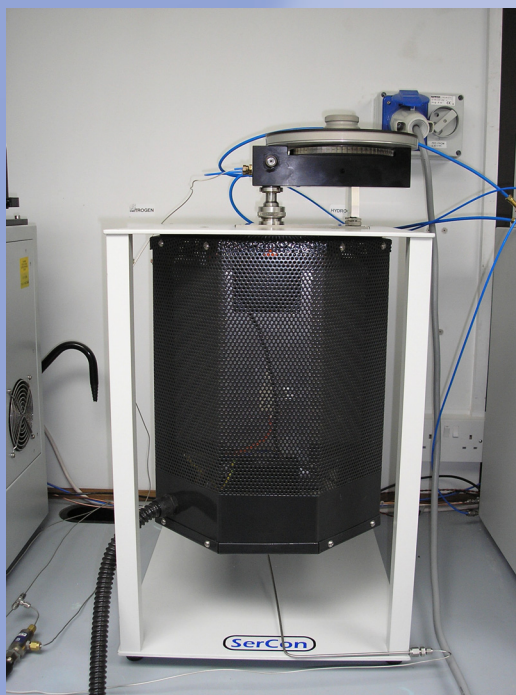




The *Stable* Isotope Company

## High Temp EA



**SerCon present the High Temp EA, the most robust 1450°C thermal decomposition elemental analyzer**

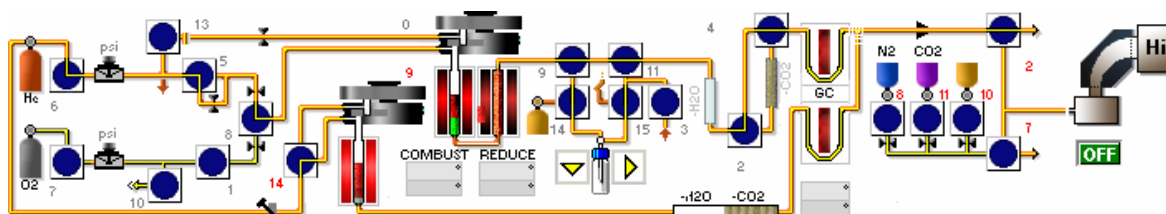
**Providing High Precision  $^{18}\text{O}$  and  $^2\text{H}$  sample analysis robustly**

Designed for utmost reliability from 600°C to 1450°C, analysis without failure

Designed to operate with the revolutionary SerCon 20-20 IRMS and SerCon Elemental Analysers

Compatible with all elemental analyzer and IRMS combinations

**The High Temp EA provides the ultimate performance**



Actual Screen Graphic from SerCon Callisto Software

Designed in conjunction with industrial furnace manufacturers, the SerCon High Temp EA is based around the latest Silicon Carbide technology. This provides the system with no-compromise, reliable performance at the high temperatures required by the scientists at the cutting edge of their research.



Example data set, range of standards throughout single run for <sup>18</sup>O analysis of CO. Alumina reaction tube, glassy carbon and nickelized carbon reagents.

|    |           |       |          |        |           |                |
|----|-----------|-------|----------|--------|-----------|----------------|
| 1  | Blank     | ----- | 1.88E-11 |        |           |                |
| 2  | Blank     | ----- | 1.72E-11 |        |           |                |
| 3  | Blank     | ----- | 5.97E-12 |        |           |                |
| 4  | e         | 0.47  | 1.30E-07 | 0.4696 | 19.501702 |                |
| 5  | e         | 0.52  | 1.69E-07 | 0.6025 | 20.899582 |                |
| 6  | sc        | 0.56  | 1.89E-07 | 0.6677 | 26.028506 |                |
| 7  | Reference | 0.49  | 1.41E-07 | 50     |           |                |
| 8  | p         | 0.52  | 1.39E-07 | 0.476  | 27.417232 | polysaccharide |
| 9  | p         | 0.51  | 1.17E-07 | 0.3968 | 28.249199 | 27.78          |
| 10 | p         | 0.51  | 1.24E-07 | 0.415  | 27.666534 | 0.43           |
| 11 | u         | 0.61  | 5.91E-08 | 0.1955 | 15.580951 | Urea           |
| 12 | u         | 0.64  | 1.10E-07 | 0.361  | 15.078014 | 15.34          |
| 13 | u         | 0.59  | 1.02E-07 | 0.3285 | 15.351542 | 0.25           |
| 14 | e         | 0.54  | 1.32E-07 | 0.4214 | 21.511174 | Ennedine       |
| 15 | e         | 0.47  | 1.38E-07 | 0.4353 | 21.270023 | 21.39          |
| 16 | sc        | 0.51  | 1.75E-07 | 0.5443 | 27.585569 | 0.17           |
| 17 | Reference | 0.56  | 1.82E-07 | 50     |           |                |
| 18 | su        | 0.56  | 2.12E-07 | 0.6635 | 30.981732 | Sucrose        |
| 19 | su        | 0.5   | 1.61E-07 | 0.5118 | 31.279267 | 30.73          |
| 20 | su        | 0.5   | 1.43E-07 | 0.4627 | 29.941052 | 0.7            |
| 21 | cy        | 0.51  | 7.32E-08 | 0.2401 | 17.250126 | Cyclohexanone  |
| 22 | cy        | 0.96  | 1.30E-07 | 0.4322 | 16.002866 | 16.54          |
| 23 | cy        | 0.97  | 1.20E-07 | 0.4069 | 16.377269 | 0.64           |
| 24 | e         | 0.5   | 1.44E-07 | 0.4951 | 21.133116 | Ennedine       |
| 25 | e         | 0.48  | 1.48E-07 | 0.5189 | 22.399685 | 21.77          |
| 26 | sc        | 0.5   | 1.45E-07 | 0.5175 | 27.237714 | 0.9            |
| 27 | Reference | 0.56  | 1.54E-07 | 50     |           |                |
| 28 | bbot      | 1.92  | 1.00E-07 | 0.3597 | 22.247084 | Bbot           |
| 29 | bbot      | 2.12  | 1.03E-07 | 0.3652 | 21.992722 | 21.62          |
| 30 | bbot      | 1.72  | 9.07E-08 | 0.3174 | 20.614605 | 0.88           |
| 31 | ace       | 2.26  | 1.72E-07 | 0.594  | 24.459147 | Acetonitrile   |
| 32 | ace       | 2.11  | 1.47E-07 | 0.5027 | 26.089896 | 25.51          |
| 33 | ace       | 2.25  | 1.86E-07 | 0.6284 | 25.985701 | 0.91           |
| 34 | e         | 0.48  | 1.35E-07 | 0.4503 | 21.383728 | Ennedine       |
| 35 | e         | 0.5   | 1.44E-07 | 0.4753 | 21.493083 | 21.44          |
| 36 | sc        | 0.48  | 1.47E-07 | 0.4808 | 27.053816 | 0.08           |
| 37 | Reference | 0.49  | 1.42E-07 | 50     |           |                |
| 38 | poly      | 0.44  | 1.01E-07 | 0.35   | 26.688622 | Polysaccharide |
| 39 | poly      | 0.44  | 9.57E-08 | 0.3306 | 27.384922 | 26.52          |
| 40 | poly      | 0.47  | 9.87E-08 | 0.3413 | 25.488434 | 0.96           |
| 41 | cell      | 0.71  | 2.08E-07 | 0.7187 | 32.925426 | Cellulose      |
| 42 | cell      | 0.73  | 2.08E-07 | 0.7227 | 32.575497 | 32.7           |
| 43 | cell      | 0.51  | 1.26E-07 | 0.4359 | 32.589272 | 0.2            |
| 44 | e         | 0.46  | 1.31E-07 | 0.4559 | 21.903742 | Ennedine       |
| 45 | e         | 0.5   | 1.31E-07 | 0.4568 | 21.41803  | 21.66          |
| 46 | sc        | 0.59  | 1.68E-07 | 0.5846 | 27.927716 | 0.34           |
| 47 | Reference | 0.59  | 1.69E-07 | 50     |           |                |

|                         |          |                      |
|-------------------------|----------|----------------------|
| Through run replication | Mean     | Ennedine (Cellulose) |
|                         | sd (n=8) | 21.5640726           |
|                         |          | 0.40488138           |
| Through run QC          | Mean     | Sigma Cellulose      |
|                         | sd (n=4) | 27.4512038           |
|                         |          | 0.38670094           |



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