**-------------------------------------------------------------------------------**

**File:hva31\_data.gpx**  Sec: 0. uC: 4.660 nA: 0.000 PUcor:1.0040

The last column is a decision on the presence of that element in the spectrum.

Y: present at level of quantization, N: not present at limit of detection

?: may be present near LOD levels (user must decide) H or uC Corr[T]: 1.213

Det Res(eV): 129.1 Chi\*\*2: 11.581 ( 11.581)

Layer H Yield Det. Filter

Element Area value /uC/ Eff. Trans. Conc. %Stat. %Fit LOD

Z Sym # counts ( -6) ppm (-3) (-5) ppm Error Error ppm

- --- - ------ ----- ----- ---- ------ ----- ----- ----- ----- -

11 NaK 1 129467 204 2866 456 100000 86075.7 0.25 0.29 136.1 Y

12 MgK 1 19818.9 253 3483 636 100000 6268.3 0.96 1.22 88.4 Y

13 AlK 1 138343 337 4419 762 100000 21651.0 0.28 0.31 55.4 Y

14 SiK 1 2652394 350 5290 782 100000 325335.6 0.05 0.13 39.0 Y

15 P K 1 2093.0 333 2823 834 100000 473.7 8.57 6.71 71.4 Y

16 S K 1 6918.5 315 3323 881 100000 1332.1 2.30 2.22 56.5 Y

17 ClK 1 47044.3 308 3651 913 100000 8134.4 0.46 0.51 34.5 Y

19 K K 1 87352.2 293 4462 951 100000 12460.9 0.33 0.35 29.2 Y

20 CaK 1 463674 321 4564 963 100000 58367.5 0.14 0.17 30.4 Y

22 TiK 1 7197.1 361 3662 977 100000 989.6 1.32 1.26 14.1 Y

24 CrK 1 2483.0 351 3363 985 100000 379.2 3.08 3.39 21.8 Y

25 MnK 1 56091.0 346 3012 988 100000 9685.2 0.38 0.40 14.3 Y

26 FeK 1 41034.5 340 2729 973 100000 8076.6 0.64 0.48 63.7 Y

29 CuK 1 470.4 340 1581 993 100000 156.6 5.64 5.80 7.8 Y

30 ZnK 1 78.7 340 1309 991 100000 31.7 17.09 18.09 6.1 Y

33 AsK 1 8.7 340 655.6 958 100000 7.2 124.01 146.12 19.1 N

37 RbK 1 0 340 250.1 796 100000 0 0 0 32.7 N

38 SrK 1 168.1 340 197.2 739 100000 602.4 8.78 10.32 57.3 Y

40 ZrK 1 20.9 340 123.8 622 100000 141.6 40.68 46.69 116.9 ?

50 SnK 1 0 340 12.44 205 100000 0 0 0 1615.2 N

82 PbLA 1 63.8 204 276.4 957 100000 209.9 22.39 32.59 61.9 ?

82 PbMA \* 1949.3 304 1021 885 100000 1259.8 12.76 10.49 424.0 ?

\*\*\* Oxide/Compound Table \*\*\*

File:hva31\_data.gpx Date:18-01-10 Time:12:28:20

This table assumes that you are dealing with fit elements tied to invisible

elements (as specified by the matrix iteration) with any additional trace

elements in elemental or oxide form. The concentrations are in units of ppm

# Z Compound c[elmt] c[inv] c[com]

- - -------- ------- ------ ------

1: 11 [Na2O ] 86076 29952 116027

2: 12 [MgO ] 6268 4125 10393

3: 13 [Al2O3 ] 21651 19258 40909

4: 14 [SiO2 ] 325336 370660 695995

5: 15 [P2O5 ] 474 612 1085

6: 16 [SO3 ] 1332 1994 3326

7: 17 [Cl ] 8134 0 8134

8: 19 [K2O ] 12461 2549 15010

9: 20 [CaO ] 58368 23300 81667

10: 22 [TiO2 ] 990 661 1651

11: 24 [Cr2O3 ] 379 175 554

12: 25 [MnO ] 9685 2821 12506

13: 26 [Fe2O3 ] 8077 3471 11547

14: 29 [Cu2O ] 157 20 176

15: 30 [ZnO ] 32 8 39

16: 33 [As2O5 ] 7 4 11

17: 37 [Rb2O ] 0 0 0

18: 38 [SrO ] 602 110 712

19: 40 [ZrO2 ] 142 50 191

20: 50 [SnO2 ] 0 0 0

21: 82 [PbO ] 210 16 226

22: 82\* [PbO ] 1260 97 1357

Total concs c[elmt]: 540379 c[inv]: 459784 c[com]: 1000163

\* -- Element not included in conc totals.

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**File:ao5\_data.gpx** Sec: 0. uC: 4.660 nA: 0.000 PUcor:1.0039

The last column is a decision on the presence of that element in the spectrum.

Y: present at level of quantization, N: not present at limit of detection

?: may be present near LOD levels (user must decide) H or uC Corr[T]: 1.237

Det Res(eV): 132.9 Chi\*\*2: 7.582 ( 7.582)

Layer H Yield Det. Filter

Element Area value /uC/ Eff. Trans. Conc. %Stat. %Fit LOD

Z Sym # counts ( -6) ppm (-3) (-5) ppm Error Error ppm

- --- - ------ ----- ----- ---- ------ ----- ----- ----- ----- -

11 NaK 1 218246 204 3042 456 100000 134005.7 0.19 0.19 110.4 Y

12 MgK 1 11751.8 253 3321 636 100000 3821.0 1.45 2.02 88.3 Y

13 AlK 1 70217.7 337 4216 762 100000 11292.5 0.44 0.47 51.9 Y

14 SiK 1 2642776 350 5199 782 100000 323343.5 0.05 0.05 30.2 Y

15 P K 1 640.0 333 2812 834 100000 142.5 27.35 22.84 69.9 ?

16 S K 1 5904.5 315 3314 881 100000 1117.3 2.83 2.59 61.0 Y

17 ClK 1 70497.1 308 3639 913 100000 11987.8 0.36 0.39 27.9 Y

19 K K 1 40864.3 293 4400 951 100000 5795.9 0.52 0.52 29.1 Y

20 CaK 1 389747 321 4605 963 100000 47677.6 0.15 0.14 35.4 Y

22 TiK 1 3797.4 361 3776 977 100000 496.3 2.31 2.09 16.8 Y

24 CrK 1 2090.8 351 3452 985 100000 305.0 3.35 3.84 19.5 Y

25 MnK 1 8928.4 346 3085 988 100000 1475.6 1.00 1.08 10.9 Y

26 FeK 1 22878.4 340 2785 973 100000 4325.6 0.65 0.59 24.0 Y

29 CuK 1 86.8 340 1629 993 100000 27.5 19.67 18.50 8.0 ?

30 ZnK 1 80.3 340 1341 991 100000 30.9 14.78 13.98 5.2 Y

33 AsK 1 22.1 340 663.7 958 100000 17.8 53.40 61.86 19.9 ?

37 RbK 1 0 340 251.0 796 100000 0 0 0 31.3 N

38 SrK 1 149.5 340 197.6 739 100000 524.0 9.07 10.67 48.6 Y

40 ZrK 1 0 340 123.8 622 100000 0 0 0 177.9 N

50 SnK 1 0 340 12.38 205 100000 0 0 0 2104.9 N

82 PbLA 1 77.8 204 279.9 957 100000 247.8 20.13 28.50 73.1 ?

82 PbMA \* 3196.1 304 1019 885 100000 2028.7 7.40 6.53 384.0 Y

\*\*\* Oxide/Compound Table \*\*\*

File:ao5\_data.gpx Date:18-01-10 Time:12:31:05

This table assumes that you are dealing with fit elements tied to invisible

elements (as specified by the matrix iteration) with any additional trace

elements in elemental or oxide form. The concentrations are in units of ppm

# Z Compound c[elmt] c[inv] c[com]

- - -------- ------- ------ ------

1: 11 [Na2O ] 134006 46630 180635

2: 12 [MgO ] 3821 2515 6336

3: 13 [Al2O3 ] 11292 10044 21337

4: 14 [SiO2 ] 323344 368390 691734

5: 15 [P2O5 ] 143 184 327

6: 16 [SO3 ] 1117 1673 2790

7: 17 [Cl ] 11988 0 11988

8: 19 [K2O ] 5796 1186 6982

9: 20 [CaO ] 47678 19032 66710

10: 22 [TiO2 ] 496 332 828

11: 24 [Cr2O3 ] 305 141 446

12: 25 [MnO ] 1476 430 1905

13: 26 [Fe2O3 ] 4326 1859 6184

14: 29 [Cu2O ] 27 3 31

15: 30 [ZnO ] 31 8 39

16: 33 [As2O5 ] 18 9 27

17: 37 [Rb2O ] 0 0 0

18: 38 [SrO ] 524 96 620

19: 40 [ZrO2 ] 0 0 0

20: 50 [SnO2 ] 0 0 0

21: 82 [PbO ] 248 19 267

22: 82\* [PbO ] 2029 157 2185

Total concs c[elmt]: 546634 c[inv]: 452550 c[com]: 999184

\* -- Element not included in conc totals.

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**File:up5\_data.gpx** Sec: 0. uC: 4.660 nA: 0.000 PUcor:1.0064

The last column is a decision on the presence of that element in the spectrum.

Y: present at level of quantization, N: not present at limit of detection

?: may be present near LOD levels (user must decide) H or uC Corr[T]: 1.519

Det Res(eV): 129.3 Chi\*\*2: 14.022 ( 14.022)

Layer H Yield Det. Filter

Element Area value /uC/ Eff. Trans. Conc. %Stat. %Fit LOD

Z Sym # counts ( -6) ppm (-3) (-5) ppm Error Error ppm

- --- - ------ ----- ----- ---- ------ ----- ----- ----- ----- -

11 NaK 1 284330 204 2991 456 100000 144914.2 0.16 0.17 118.7 Y

12 MgK 1 24568.2 253 3208 636 100000 6751.6 0.83 1.08 80.0 Y

13 AlK 1 93970.9 337 4032 762 100000 12901.5 0.38 0.38 49.6 Y

14 SiK 1 2888194 350 4963 782 100000 302170.0 0.05 0.05 36.9 Y

15 P K 1 2627.5 333 2850 834 100000 471.3 7.95 6.18 66.4 Y

16 S K 1 9992.8 315 3362 881 100000 1521.9 1.94 1.81 54.8 Y

17 ClK 1 66207.5 308 3690 913 100000 9065.2 0.39 0.42 30.6 Y

19 K K 1 66505.8 293 4493 951 100000 7540.8 0.39 0.39 25.3 Y

20 CaK 1 539608 321 4668 963 100000 53156.8 0.13 0.12 25.2 Y

22 TiK 1 7452.8 361 3768 977 100000 796.9 1.38 1.29 13.6 Y

24 CrK 1 1253.3 351 3446 985 100000 149.5 6.87 6.74 24.2 Y

25 MnK 1 49780.1 346 3076 988 100000 6736.8 0.40 0.42 16.1 Y

26 FeK 1 58840.1 340 2779 973 100000 9102.3 0.49 0.37 48.2 Y

29 CuK 1 366.2 340 1601 993 100000 96.3 7.24 7.16 10.0 Y

30 ZnK 1 65.2 340 1322 991 100000 20.8 21.83 20.44 5.3 ?

33 AsK 1 24.1 340 658.6 958 100000 16.0 46.36 56.15 16.4 ?

37 RbK 1 0 340 250.3 796 100000 0 0 0 25.9 N

38 SrK 1 173.4 340 197.2 739 100000 497.2 8.71 10.12 46.6 Y

40 ZrK 1 43.7 340 123.7 622 100000 237.5 23.13 26.04 106.4 ?

50 SnK 1 0 340 12.40 205 100000 0 0 0 2530.5 N

82 PbLA 1 67.0 204 277.7 957 100000 175.6 22.27 35.29 68.7 ?

82 PbMA \* 3320.8 304 1033 885 100000 1696.9 9.43 7.20 423.5 Y

\*\*\* Oxide/Compound Table \*\*\*

File:up5\_data.gpx Date:18-01-10 Time:12:35:31

This table assumes that you are dealing with fit elements tied to invisible

elements (as specified by the matrix iteration) with any additional trace

elements in elemental or oxide form. The concentrations are in units of ppm

# Z Compound c[elmt] c[inv] c[com]

- - -------- ------- ------ ------

1: 11 [Na2O ] 144914 50425 195340

2: 12 [MgO ] 6752 4443 11195

3: 13 [Al2O3 ] 12902 11476 24377

4: 14 [SiO2 ] 302170 344267 646437

5: 15 [P2O5 ] 471 609 1080

6: 16 [SO3 ] 1522 2278 3800

7: 17 [Cl ] 9065 0 9065

8: 19 [K2O ] 7541 1543 9084

9: 20 [CaO ] 53157 21219 74376

10: 22 [TiO2 ] 797 532 1329

11: 24 [Cr2O3 ] 149 69 218

12: 25 [MnO ] 6737 1962 8699

13: 26 [Fe2O3 ] 9102 3912 13014

14: 29 [Cu2O ] 96 12 108

15: 30 [ZnO ] 21 5 26

16: 33 [As2O5 ] 16 9 24

17: 37 [Rb2O ] 0 0 0

18: 38 [SrO ] 497 91 588

19: 40 [ZrO2 ] 238 83 321

20: 50 [SnO2 ] 0 0 0

21: 82 [PbO ] 176 14 189

22: 82\* [PbO ] 1697 131 1828

Total concs c[elmt]: 556322 c[inv]: 442948 c[com]: 999271

\* -- Element not included in conc totals.

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**File:glass20** 1microC 8%deadti Sec: 0. uC: 4.660 nA: 0.000 PUcor:1.0068

The last column is a decision on the presence of that element in the spectrum.

Y: present at level of quantization, N: not present at limit of detection

?: may be present near LOD levels (user must decide) H or uC Corr[T]: 1.174

Det Res(eV): 129.3 Chi\*\*2: 8.957 ( 8.957)

Layer H Yield Det. Filter

Element Area value /uC/ Eff. Trans. Conc. %Stat. %Fit LOD

Z Sym # counts ( -6) ppm (-3) (-5) ppm Error Error ppm

- --- - ------ ----- ----- ---- ------ ----- ----- ----- ----- -

11 NaK 1 92865.0 204 2840 456 100000 64549.2 0.30 0.31 136.7 Y

12 MgK 1 22760.6 253 3610 636 100000 7195.2 0.92 0.99 92.1 Y

13 AlK 1 54239.8 337 4534 762 100000 8572.6 0.57 0.56 61.9 Y

14 SiK 1 2836655 350 5609 782 100000 340014.0 0.05 0.05 28.1 Y

15 P K 1 11698.3 333 2831 834 100000 2735.7 1.93 1.55 84.8 Y

16 S K 1 7110.8 315 3313 881 100000 1422.9 3.63 2.53 109.2 Y

17 ClK 1 19394.5 308 3548 913 100000 3574.8 0.94 0.94 48.1 Y

19 K K 1 48947.5 293 4351 951 100000 7420.2 0.49 0.48 39.3 Y

20 CaK 1 604516 321 4477 963 100000 80378.1 0.12 0.11 42.3 Y

22 TiK 1 1788.4 361 3395 977 100000 274.8 4.40 3.91 20.3 Y

24 CrK 1 209.7 351 3156 985 100000 35.4 44.43 46.95 41.5 ?

25 MnK 1 9421.7 346 2856 988 100000 1777.7 1.00 1.03 8.4 Y

26 FeK 1 4886.4 340 2610 973 100000 1041.7 1.75 1.53 21.7 Y

29 CuK 1 96.4 340 1583 993 100000 33.2 25.12 24.16 15.1 ?

30 ZnK 1 105.6 340 1314 991 100000 43.9 19.75 19.70 12.5 ?

33 AsK 1 4001.2 340 659.1 958 100000 3431.3 2.62 2.09 195.6 Y

37 RbK 1 0 340 248.3 796 100000 0 0 0 87.4 N

38 SrK 1 24.6 340 196.0 739 100000 92.0 41.97 48.42 59.8 ?

40 ZrK 1 15.0 340 123.0 622 100000 106.3 54.85 61.96 102.3 ?

50 SnK 1 0 340 12.45 205 100000 0 0 0 1869.0 N

82 PbLA 1 3532.1 204 276.7 957 100000 12026.0 4.63 3.08 1438.4 Y

82 PbMA \* 12483.3 304 1018 885 100000 8386.9 2.30 1.91 461.0 Y

\*\*\* Oxide/Compound Table \*\*\*

File:glass20 1microC 8%deadti Date:18-01-10 Time:12:46:20

This table assumes that you are dealing with fit elements tied to invisible

elements (as specified by the matrix iteration) with any additional trace

elements in elemental or oxide form. The concentrations are in units of ppm

# Z Compound c[elmt] c[inv] c[com]

- - -------- ------- ------ ------

1: 11 [Na2O ] 64549 22461 87010

2: 12 [MgO ] 7195 4735 11930

3: 13 [Al2O3 ] 8573 7625 16198

4: 14 [SiO2 ] 340014 387383 727397

5: 15 [P2O5 ] 2736 3533 6269

6: 16 [SO3 ] 1423 2130 3553

7: 17 [Cl ] 3575 0 3575

8: 19 [K2O ] 7420 1518 8938

9: 20 [CaO ] 80378 32086 112464

10: 22 [TiO2 ] 275 184 458

11: 24 [Cr2O3 ] 35 16 52

12: 25 [MnO ] 1778 518 2295

13: 26 [Fe2O3 ] 1042 448 1489

14: 29 [Cu2O ] 33 4 37

15: 30 [ZnO ] 44 11 55

16: 33 [As2O5 ] 3431 1832 5263

17: 37 [Rb2O ] 0 0 0

18: 38 [SrO ] 92 17 109

19: 40 [ZrO2 ] 106 37 144

20: 50 [SnO2 ] 0 0 0

21: 82 [PbO ] 12026 929 12955

22: 82\* [PbO ] 8387 648 9035

Total concs c[elmt]: 534725 c[inv]: 465466 c[com]: 1000191

\* -- Element not included in conc totals.

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**File:glass43** 3microC 7%deadti Sec: 0. uC: 4.660 nA: 0.000 PUcor:1.0090

The last column is a decision on the presence of that element in the spectrum.

Y: present at level of quantization, N: not present at limit of detection

?: may be present near LOD levels (user must decide) H or uC Corr[T]: 3.194

Det Res(eV): 130.0 Chi\*\*2: 51.909 ( 51.909)

Layer H Yield Det. Filter

Element Area value /uC/ Eff. Trans. Conc. %Stat. %Fit LOD

Z Sym # counts ( -6) ppm (-3) (-5) ppm Error Error ppm

- --- - ------ ----- ----- ---- ------ ----- ----- ----- ----- -

11 NaK 1 311099 204 2834 456 100000 79818.5 0.16 0.20 93.6 Y

12 MgK 1 97911.6 253 3493 636 100000 11785.2 0.37 0.43 54.9 Y

13 AlK 1 198684 337 4376 762 100000 11985.0 0.29 0.29 36.3 Y

14 SiK 1 7216549 350 5385 782 100000 331856.8 0.03 0.10 20.6 Y

15 P K 1 25357.3 333 2833 834 100000 2182.3 1.51 1.10 52.6 Y

16 S K 1 9643.2 315 3324 881 100000 708.3 3.68 2.70 53.8 Y

17 ClK 1 136809 308 3634 913 100000 9070.0 0.28 0.31 25.1 Y

19 K K 1 315788 293 4419 951 100000 17362.9 0.18 0.19 16.6 Y

20 CaK 1 1213183 321 4457 963 100000 59692.2 0.10 0.12 31.4 Y

22 TiK 1 12684.7 361 3577 977 100000 681.4 1.23 1.10 11.6 Y

24 CrK 1 0 351 3306 985 100000 0 0 0 43.8 N

25 MnK 1 92687.5 346 2967 988 100000 6200.6 0.30 0.32 7.9 Y

26 FeK 1 137630 340 2697 973 100000 10461.9 0.34 0.26 39.7 Y

29 CuK 1 9502.6 340 1574 993 100000 1212.4 1.05 1.06 10.5 Y

30 ZnK 1 7869.2 340 1305 991 100000 1213.0 1.09 1.18 6.6 Y

33 AsK 1 294.1 340 653.7 958 100000 93.7 23.03 19.21 56.9 ?

37 RbK 1 0 340 249.5 796 100000 0 0 0 49.0 N

38 SrK 1 431.9 340 196.8 739 100000 591.8 5.37 7.01 15.4 Y

40 ZrK 1 0 340 123.6 622 100000 0 0 0 117.0 N

50 SnK 1 0 340 12.46 205 100000 0 0 0 1171.1 N

82 PbLA 1 2610.9 204 275.3 957 100000 3290.7 2.71 3.63 103.5 Y

82 PbMA \* 13642.6 304 1021 885 100000 3365.0 3.06 2.67 247.4 Y