

Expressions

Expo_Used

1.8

Expo_Used is not a reference material value

Expo_Used is not a parameter value

Expo_Used is healthy

Expo_Used is not Squid Switch NU

Excel Expression String: 1.8

Notes:

No notes

Uncor_206Pb238U_CalibConst

$$\frac{\frac{206_{\text{Pb}}}{238_{\text{U}}}}{\left(\frac{254_{\text{UO}}}{238_{\text{U}}}\right)^{\text{Expo_Used}}}$$

Uncor_206Pb238U_CalibConst is not a reference material value

Uncor_206Pb238U_CalibConst is not a parameter value

Uncor_206Pb238U_CalibConst is healthy

Uncor_206Pb238U_CalibConst is Squid Switch NU

Excel Expression String: ["206/238"]/[["254/238"]^Expo_Used]

Notes:

RM and Sample spots: 206Pb/238U calibration constant, uncorrected for common Pb, evaluated via Special U-Th-Pb Expression. Calculated by all Tasks, except Th-Pb Tasks that calculate only a single 208Pb/232Th calibration ("Perm3").

232Th238U_RM

$$\left(0.03446 * \frac{254_{\text{UO}}}{238_{\text{U}}} + 0.868\right) * \frac{248_{\text{ThO}}}{254_{\text{UO}}}$$

232Th238U_RM is not a reference material value

232Th238U_RM is not a parameter value

232Th238U_RM is healthy

232Th238U_RM is Squid Switch NU

Excel Expression String: (0.03446*["254/238"]+0.868)*["248/254"]

Notes:

RM spots: Calculated 232Th/238U. In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

232Th238U

$$\left(0.03446 * \frac{254_{\text{UO}}}{238_{\text{U}}} + 0.868 \right) * \frac{248_{\text{ThO}}}{254_{\text{UO}}}$$

232Th238U is not a reference material value

232Th238U is not a parameter value

232Th238U is healthy

232Th238U is Squid Switch NU

Excel Expression String: (0.03446*["254/238"]+0.868)*["248/254"]

Notes:

Sample spots: 232Th/238U. In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

ParentElement_ConcenConst

$$\frac{\frac{238_{\text{U}}}{195.8_{\text{Zr}}}}{\left(\frac{254_{\text{UO}}}{238_{\text{U}}} \right)^{0.66}}$$

ParentElement_ConcenConst is not a reference material value

ParentElement_ConcenConst is not a parameter value

ParentElement_ConcenConst is healthy

ParentElement_ConcenConst is Squid Switch NU

Excel Expression String: ["238/195.8"]/[("254/238")^0.66]

Notes:

RM and Sample spots: Parent Element concentration constant, for nominated Parent Element of Concentration RM, evaluated via Special U-Th-Pb Expression.

LnUOU

$$\ln \left(\frac{254_{\text{UO}}}{238_{\text{U}}} \right)$$

LnUOU is not a reference material value

LnUOU is not a parameter value

LnUOU is healthy

LnUOU is Squid Switch NU

Excel Expression String: ln(["254/238"])

Notes:
No notes

LnPbU

$$\ln \left(\frac{^{206}\text{Pb}}{^{238}\text{U}} \right)$$

LnPbU is not a reference material value

LnPbU is not a parameter value

LnPbU is healthy

LnPbU is Squid Switch NU

Excel Expression String: `Ln(["206/238"])`

Notes:
No notes

lnUOU-sample

$$\ln \left(\frac{^{254}\text{UO}}{^{238}\text{U}} \right)$$

lnUOU-sample is not a reference material value

lnUOU-sample is not a parameter value

lnUOU-sample is healthy

lnUOU-sample is Squid Switch NU

Excel Expression String: `ln(["254/238"])`

Notes:
No notes

lnPbU-sample

$$\ln \left(\frac{^{206}\text{Pb}}{^{238}\text{U}} \right)$$

lnPbU-sample is not a reference material value

lnPbU-sample is not a parameter value

lnPbU-sample is healthy

lnPbU-sample is Squid Switch NU

Excel Expression String: `Ln(["206/238"])`

Notes:
No notes

RefRad_206Pb238U_Age

5.591E8

RefRad_206Pb238U_Age is a reference material value

RefRad_206Pb238U_Age is not a parameter value

RefRad_206Pb238U_Age is healthy

RefRad_206Pb238U_Age is not Squid Switch NU

Excel Expression String: 5.591E8

Notes:

Reference radiogenic 206Pb/238U age of RM.

RefRad_208Pb232Th_Age

5.591E8

RefRad_208Pb232Th_Age is a reference material value

RefRad_208Pb232Th_Age is not a parameter value

RefRad_208Pb232Th_Age is healthy

RefRad_208Pb232Th_Age is not Squid Switch NU

Excel Expression String: 5.591E8

Notes:

Reference radiogenic 208Pb/232Th age of RM.

RefRad_207Pb206Pb_Age

5.591E8

RefRad_207Pb206Pb_Age is a reference material value

RefRad_207Pb206Pb_Age is not a parameter value

RefRad_207Pb206Pb_Age is healthy

RefRad_207Pb206Pb_Age is not Squid Switch NU

Excel Expression String: 5.591E8

Notes:

Reference radiogenic 207Pb/206Pb age of RM.

Present_238U235U

137.88

Present_238U235U is a reference material value

Present_238U235U is not a parameter value

Present_238U235U is healthy

Present_238U235U is not Squid Switch NU

Excel Expression String: 137.88

Notes:
none yet provided

Lambda238

$$1.55125E - 10$$

Lambda238 is not a reference material value
Lambda238 is a parameter value
Lambda238 is healthy
Lambda238 is not Squid Switch NU

Excel Expression String: 1.55125E-10

Notes:
Decay constant for 238U.

RefRad_206Pb238U

$$e^{(\text{Lambda238} * \text{RefRad_206Pb238U_Age}) - 1}$$

RefRad_206Pb238U is a reference material value
RefRad_206Pb238U is not a parameter value
RefRad_206Pb238U is healthy
RefRad_206Pb238U is not Squid Switch NU

Excel Expression String: EXP(Lambda238*RefRad_206Pb238U_Age)-1

Notes:
Reference radiogenic 206Pb/238U of RM.

Lambda232

$$4.9475E - 11$$

Lambda232 is not a reference material value
Lambda232 is a parameter value
Lambda232 is healthy
Lambda232 is not Squid Switch NU

Excel Expression String: 4.9475E-11

Notes:
Decay constant for 232Th.

RefRad_208Pb232Th

$$e^{(\text{Lambda232} * \text{RefRad_208Pb232Th_Age}) - 1}$$

RefRad_208Pb232Th is a reference material value
RefRad_208Pb232Th is not a parameter value

RefRad_208Pb232Th is healthy

RefRad_208Pb232Th is not Squid Switch NU

Excel Expression String: EXP(Lambda232*RefRad_208Pb232Th_Age)-1

Notes:

Reference radiogenic 208Pb/232Th of RM.

RefRad_207Pb206Pb

Pb76 (RefRad_207Pb206Pb_Age)

RefRad_207Pb206Pb is a reference material value

RefRad_207Pb206Pb is not a parameter value

RefRad_207Pb206Pb is healthy

RefRad_207Pb206Pb is not Squid Switch NU

Excel Expression String: Pb76(RefRad_207Pb206Pb_Age)

Notes:

Reference radiogenic 207Pb/206Pb of RM.

RefRad_208Pb206Pb_Factor

RefRad_208Pb232Th

RefRad_206Pb238U

RefRad_208Pb206Pb_Factor is a reference material value

RefRad_208Pb206Pb_Factor is not a parameter value

RefRad_208Pb206Pb_Factor is healthy

RefRad_208Pb206Pb_Factor is not Squid Switch NU

Excel Expression String: RefRad_208Pb232Th/RefRad_206Pb238U

Notes:

Factor defined as (radiogenic 208Pb/206Pb) * (238U/232Th) for RM;

determined arithmetically as (exp[Lambda232 * RefRad_208Pb232Th_Age] - 1)

/ (exp[Lambda238 * RefRad_206Pb238U_Age] - 1).

Ref_U_Concen

903.0

Ref_U_Concen is a reference material value

Ref_U_Concen is not a parameter value

Ref_U_Concen is healthy

Ref_U_Concen is not Squid Switch NU

Excel Expression String: 903.0

Notes:

Reference U content of CM.

Ref_Th_Concen

0.0

Ref_Th_Concen is a reference material value

Ref_Th_Concen is not a parameter value

Ref_Th_Concen is healthy

Ref_Th_Concen is not Squid Switch NU

Excel Expression String: 0.0

Notes:

Reference Th content of CM.

DefCom_206Pb204Pb

17.821

DefCom_206Pb204Pb is not a reference material value

DefCom_206Pb204Pb is a parameter value

DefCom_206Pb204Pb is healthy

DefCom_206Pb204Pb is not Squid Switch NU

Excel Expression String: 17.821

Notes:

Assumed 206Pb/204Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

DefCom_207Pb204Pb

15.5773361

DefCom_207Pb204Pb is not a reference material value

DefCom_207Pb204Pb is a parameter value

DefCom_207Pb204Pb is healthy

DefCom_207Pb204Pb is not Squid Switch NU

Excel Expression String: 15.5773361

Notes:

Assumed 207Pb/204Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

DefCom_208Pb204Pb

37.5933995

DefCom_208Pb204Pb is not a reference material value

DefCom_208Pb204Pb is a parameter value

DefCom_208Pb204Pb is healthy

DefCom_208Pb204Pb is not Squid Switch NU

Excel Expression String: 37.5933995

Notes:

Assumed 208Pb/204Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

DefCom_207Pb206Pb

0.8741

DefCom_207Pb206Pb is not a reference material value

DefCom_207Pb206Pb is a parameter value

DefCom_207Pb206Pb is healthy

DefCom_207Pb206Pb is not Squid Switch NU

Excel Expression String: 0.8741

Notes:

Assumed 207Pb/206Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

DefCom_208Pb206Pb

2.1095

DefCom_208Pb206Pb is not a reference material value

DefCom_208Pb206Pb is a parameter value

DefCom_208Pb206Pb is healthy

DefCom_208Pb206Pb is not Squid Switch NU

Excel Expression String: 2.1095

Notes:

Assumed 208Pb/206Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

DefCom_206Pb208Pb

$$\frac{1.0}{2.1095}$$

DefCom_206Pb208Pb is not a reference material value

DefCom_206Pb208Pb is a parameter value

DefCom_206Pb208Pb is healthy

DefCom_206Pb208Pb is not Squid Switch NU

Excel Expression String: 1.0/2.1095

Notes:

Assumed 206Pb/208Pb of default common Pb, as applied to RM and (as first approximation of common Pb) to Samples.

Lambda230

$9.1577E - 6$

Lambda230 is not a reference material value

Lambda230 is a parameter value

Lambda230 is healthy

Lambda230 is not Squid Switch NU

Excel Expression String: 9.1577E-6

Notes:

Decay constant for 230Th.

Lambda234

$2.835E - 6$

Lambda234 is not a reference material value

Lambda234 is a parameter value

Lambda234 is healthy

Lambda234 is not Squid Switch NU

Excel Expression String: 2.835E-6

Notes:

Decay constant for 234U.

Lambda235

$9.8485E - 10$

Lambda235 is not a reference material value

Lambda235 is a parameter value

Lambda235 is healthy

Lambda235 is not Squid Switch NU

Excel Expression String: 9.8485E-10

Notes:

Decay constant for 235U.

4cor_206Pb238U_CalibConst

$$\text{ValueModel} \left(\left(1 - \frac{^{204}\text{Pb}}{^{206}\text{Pb}} * \text{DefCom_206Pb204Pb} \right) * \text{Uncor_206} \right)$$

4cor_206Pb238U_CalibConst is not a reference material value

4cor_206Pb238U_CalibConst is not a parameter value

4cor_206Pb238U_CalibConst is healthy

4cor_206Pb238U_CalibConst is not Squid Switch NU

Excel Expression String: ValueModel((1-["204/206"]*DefCom_206Pb204Pb)*
["Uncor_206Pb238U_CalibConst"],sqrt([\%"Uncor_206Pb238U_CalibConst"\]^2+
(DefCom_206Pb204Pb/(1/["204/206"]-DefCom_206Pb204Pb))^2*[\%"204/206"\]^2),false)

Notes:

RM spots: 204Pb-corrected 206Pb/238U calibration constant. Calculated for RMs
in all Tasks except Th-Pb Tasks that calculate only a single
208Pb/232Th calibration ("Perm3").

WtdAv_4cor_206Pb238U_CalibConst

$$\text{WtdMeanACalc} \left(4\text{cor_206Pb238U_CalibConst}, (4\text{cor_206Pb238U_CalibConst})^2 \right)$$

WtdAv_4cor_206Pb238U_CalibConst is not a reference material value

WtdAv_4cor_206Pb238U_CalibConst is not a parameter value

WtdAv_4cor_206Pb238U_CalibConst is healthy

WtdAv_4cor_206Pb238U_CalibConst is not Squid Switch NU

Excel Expression String: WtdMeanACalc(["4cor_206Pb238U_CalibConst"],[\%"4cor_206Pb238U_CalibConst"],FALSE,FALSE)

Notes:

RM dataset: Weighted mean of 204Pb-corrected 206Pb/238U calibration constants.
Calculated by all Tasks except Th-Pb Tasks that calculate only a single 208Pb/232Th calibration
("Perm3").

4cor_206Pb238U_Ext1SigmaErr_Pct

$$\max \left(\text{ExtPErr}, \frac{\text{WtdAv_4cor_206Pb238U_CalibConst}[1]}{\text{WtdAv_4cor_206Pb238U_CalibConst}} * 100 \right)$$

4cor_206Pb238U_Ext1SigmaErr_Pct is not a reference material value

4cor_206Pb238U_Ext1SigmaErr_Pct is not a parameter value

4cor_206Pb238U_Ext1SigmaErr_Pct is healthy

4cor_206Pb238U_Ext1SigmaErr_Pct is not Squid Switch NU

Excel Expression String: Max(ExtPErr,["WtdAv_4cor_206Pb238U_CalibConst"] [1]/
["WtdAv_4cor_206Pb238U_CalibConst"] [0]*100)

Notes:

RM dataset: Calculated external (spot-to-spot) 1sigma uncertainty
(expressed as a percentage), derived from WtdAv_4cor_206Pb238U_CalibConst,
subject to a user-defined minimum value. Calculated by all Tasks except
Th-Pb Tasks that calculate only a single 208Pb/232Th calibration ("Perm3").

4cor_Total_206Pb238U_RM

$$\text{ValueModel} \left(\frac{\text{Uncor}_\text{206Pb238U_CalibConst}}{\text{WtdAv}_\text{4cor}_\text{206Pb238U_CalibConst}} * \text{RefRad}_\text{206Pb238U_SQRT}([\% \text{Uncor}_\text{206Pb238U_CalibConst}]^2 + [\text{4cor}_\text{206Pb238U_Ext1SigmaErr_Pct}]^2), \text{false} \right)$$

4cor_Total_206Pb238U_RM is not a reference material value

4cor_Total_206Pb238U_RM is not a parameter value

4cor_Total_206Pb238U_RM is healthy

4cor_Total_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_4cor_206Pb238U_CalibConst"] [0]*RefRad_206Pb238U_SQRT([\%
Uncor_206Pb238U_CalibConst]^2+["4cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

RM spots: Calculated total 206Pb/238U. Always depends on the index isotope
(204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

Total_206Pb238U_RM

4cor_Total_206Pb238U_RM

Total_206Pb238U_RM is not a reference material value

Total_206Pb238U_RM is not a parameter value

Total_206Pb238U_RM is healthy

Total_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ["4cor_Total_206Pb238U_RM"]

Notes:

RM spots: Calculated total 206Pb/238U. Always depends on the index isotope (204Pb, 207Pb, or in
the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

4cor_Total_206Pb238U

$$\text{ValueModel} \left(\frac{\text{Uncor}_\text{206Pb238U_CalibConst}}{\text{WtdAv}_\text{4cor}_\text{206Pb238U_CalibConst}} * \text{RefRad}_\text{206Pb238U_SQRT}([\% \text{Uncor}_\text{206Pb238U_CalibConst}]^2 + [\text{4cor}_\text{206Pb238U_Ext1SigmaErr_Pct}]^2), \text{false} \right)$$

4cor_Total_206Pb238U is not a reference material value

4cor_Total_206Pb238U is not a parameter value

4cor_Total_206Pb238U is healthy
4cor_Total_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_4cor_206Pb238U_CalibConst"][0]*RefRad_206Pb238U,SQRT([%"
Uncor_206Pb238U_CalibConst"]^2+["4cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

Sample spots: Calculated total 206Pb/238U. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

Total_206Pb238U

4cor_Total_206Pb238U

Total_206Pb238U is not a reference material value

Total_206Pb238U is not a parameter value

Total_206Pb238U is healthy

Total_206Pb238U is not Squid Switch NU

Excel Expression String: ["4cor_Total_206Pb238U"]

Notes:

Sample spots: Calculated total 206Pb/238U. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

4cor_Total_208Pb232Th_RM

$$\text{ValueModel} \left(\frac{\text{Total}_\text{206Pb238U}_\text{RM} * \frac{208_\text{Pb}}{206_\text{Pb}}}{\text{232Th}_\text{238U}_\text{RM}} , \sqrt{\left(\left(\frac{208_\text{Pb}}{206_\text{Pb}} \right) \% \right)^2} \right)$$

4cor_Total_208Pb232Th_RM is not a reference material value

4cor_Total_208Pb232Th_RM is not a parameter value

4cor_Total_208Pb232Th_RM is healthy

4cor_Total_208Pb232Th_RM is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U_RM"]*["208/206"]/[("232Th238U_RM"],
SQRT([%"208/206"]^2+[%"Total_206Pb238U_RM"]^2+[%"232Th238U_RM"]^2),false)

Notes:

RM spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

Total_208Pb232Th_RM

4cor_Total_208Pb232Th_RM

Total_208Pb232Th_RM is not a reference material value

Total_208Pb232Th_RM is not a parameter value

Total_208Pb232Th_RM is healthy

Total_208Pb232Th_RM is not Squid Switch NU

Excel Expression String: ["4cor_Total_208Pb232Th_RM"]

Notes:

RM spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

4cor_Total_208Pb232Th

$$\text{ValueModel} \left(\frac{\text{Total_206Pb238U} * \frac{208_{\text{Pb}}}{206_{\text{Pb}}}}{\text{232Th238U}} \right), \sqrt{\left(\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}} \right)^{\%} \right)^2 + ((T$$

4cor_Total_208Pb232Th is not a reference material value

4cor_Total_208Pb232Th is not a parameter value

4cor_Total_208Pb232Th is healthy

4cor_Total_208Pb232Th is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U"]*["208/206"]/[{"232Th238U"}],SQRT([%"208/206"]^2+[%"Total_206Pb238U"]^2+[%"232Th238U"]^2),false)

Notes:

Sample spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

Total_208Pb232Th

4cor_Total_208Pb232Th

Total_208Pb232Th is not a reference material value

Total_208Pb232Th is not a parameter value

Total_208Pb232Th is healthy

Total_208Pb232Th is not Squid Switch NU

Excel Expression String: ["4cor_Total_208Pb232Th"]

Notes:

Sample spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

204Pb206Pb_From207Pb

$$\text{ValueModel} \left(\frac{\left(\frac{^{207}\text{Pb}}{^{206}\text{Pb}} - \text{RefRad_207Pb206Pb} \right)}{(\text{DefCom_207Pb204Pb} - \text{RefRad_207Pb206Pb}) * I} \right)$$

$^{204}\text{Pb206Pb_From207Pb}$ is not a reference material value

$^{204}\text{Pb206Pb_From207Pb}$ is not a parameter value

$^{204}\text{Pb206Pb_From207Pb}$ is healthy

$^{204}\text{Pb206Pb_From207Pb}$ is not Squid Switch NU

Excel Expression String: $\text{ValueModel}((["207/206"]-\text{RefRad_207Pb206Pb})/(\text{DefCom_207Pb204Pb}-\text{RefRad_207Pb206Pb}*\text{DefCom_206Pb204Pb}),\text{ABS}([\%"207/206"]*["207/206"]/(["207/206"]-\text{RefRad_207Pb206Pb})),\text{false})$

Notes:

RM spots: $^{204}\text{Pb}/^{206}\text{Pb}$ corrected for overcounts at mass 204, based on counts at 207Pb.

7cor_206Pb238U_CalibConst

$$\text{ValueModel} \left((1 - 204\text{Pb206Pb_From207Pb} * \text{DefCom_206Pb204Pb}) * \left(1 - \frac{\text{Uncor_206Pb238U_CalibConst}}{\text{DefCom_206Pb204Pb}} \right) \right)$$

$7\text{cor_206Pb238U_CalibConst}$ is not a reference material value

$7\text{cor_206Pb238U_CalibConst}$ is not a parameter value

$7\text{cor_206Pb238U_CalibConst}$ is healthy

$7\text{cor_206Pb238U_CalibConst}$ is not Squid Switch NU

Excel Expression String: $\text{ValueModel}((1-["204\text{Pb206Pb_From207Pb}"]*\text{DefCom_206Pb204Pb})*["Uncor_206Pb238U_CalibConst"],\text{sqrt}([\%"Uncor_206Pb238U_CalibConst"]^2+(\text{DefCom_206Pb204Pb}/(1/["204\text{Pb206Pb_From207Pb}"]-\text{DefCom_206Pb204Pb}))^2*[\%"204\text{Pb206Pb_From207Pb}"]^2),\text{false})$

Notes:

RM spots: 207Pb-corrected $^{206}\text{Pb}/^{238}\text{U}$ calibration constant.

Calculated by all Tasks except Th-Pb Tasks that calculate only a single $^{208}\text{Pb}/^{232}\text{Th}$ calibration ("Perm3").

WtdAv_7cor_206Pb238U_CalibConst

$$\text{WtdMeanACalc} \left(7\text{cor_206Pb238U_CalibConst}, (7\text{cor_206Pb238U_CalibConst} * \text{WtdAv_7cor_206Pb238U_CalibConst}) / (\text{WtdAv_7cor_206Pb238U_CalibConst} + 1) \right)$$

$WtdAv_7cor_206Pb238U_CalibConst$ is not a reference material value

$WtdAv_7cor_206Pb238U_CalibConst$ is not a parameter value

$WtdAv_7cor_206Pb238U_CalibConst$ is healthy

$WtdAv_7cor_206Pb238U_CalibConst$ is not Squid Switch NU

Excel Expression String: WtdMeanACalc(["7cor_206Pb238U_CalibConst"],[% "7cor_206Pb238U_CalibConst"],FALSE,TRUE)

Notes:

RM dataset: Weighted mean of 207Pb-corrected 206Pb/238U calibration constants. Calculated by all Tasks except Th-Pb Tasks that calculate only a single 208Pb/232Th calibration ("Perm3").

7cor_206Pb238U_Ext1SigmaErr_Pct

$$\max \left(ExtPErr, \frac{WtdAv_7cor_206Pb238U_CalibConst[1]}{WtdAv_7cor_206Pb238U_CalibConst} * 100 \right)$$

7cor_206Pb238U_Ext1SigmaErr_Pct is not a reference material value

7cor_206Pb238U_Ext1SigmaErr_Pct is not a parameter value

7cor_206Pb238U_Ext1SigmaErr_Pct is healthy

7cor_206Pb238U_Ext1SigmaErr_Pct is not Squid Switch NU

Excel Expression String: Max(ExtPErr,["WtdAv_7cor_206Pb238U_CalibConst"] [1]/
["WtdAv_7cor_206Pb238U_CalibConst"] [0]*100)

Notes:

RM dataset: Calculated external (spot-to-spot) 1sigma uncertainty (expressed as a percentage), derived from WtdAv_7cor_206Pb238U_CalibConst, subject to a user-defined minimum value. Calculated by all Tasks except Th-Pb Tasks that calculate only a single 208Pb/232Th calibration ("Perm3").

204Pb206Pb_From208Pb

$$\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}} - \text{RefRad_208Pb206Pb_Factor} * 232^{\text{Th}} \right)$$

$$(\text{DefCom_208Pb204Pb} - \text{RefRad_208Pb206Pb_Factor} * 232^{\text{Th}})$$

204Pb206Pb_From208Pb is not a reference material value

204Pb206Pb_From208Pb is not a parameter value

204Pb206Pb_From208Pb is healthy

204Pb206Pb_From208Pb is not Squid Switch NU

Excel Expression String: (["208/206"] - RefRad_208Pb206Pb_Factor * ["232Th238U_RM"])/
(DefCom_208Pb204Pb - RefRad_208Pb206Pb_Factor * ["232Th238U_RM"] * DefCom_206Pb204Pb)

Notes:

RM spots: 204Pb/206Pb corrected for overcounts at mass 204, based on counts at 208Pb. In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

8cor_206Pb238U_CalibConst

$$\text{ValueModel} \left(1 - 204\text{Pb}206\text{Pb_From208Pb} * \text{DefCom_206Pb20} \right)$$

8cor_206Pb238U_CalibConst is not a reference material value

8cor_206Pb238U_CalibConst is not a parameter value

8cor_206Pb238U_CalibConst is healthy

8cor_206Pb238U_CalibConst is not Squid Switch NU

Excel Expression String: ValueModel((1-["204Pb206Pb_From208Pb"]*DefCom_206Pb204Pb)*["Uncor_206Pb238U_CalibConst"],SQRT([%"Uncor_206Pb238U_CalibConst"]^2+(DefCom_206Pb204Pb*["Uncor_206Pb238U_CalibConst"]*["204Pb206Pb_From208Pb"])/((1-["204Pb206Pb_From208Pb"]*DefCom_206Pb204Pb)*["Uncor_206Pb238U_CalibConst"]))^2*((["208/206"]*[%"208/206"]/[%"208/206"]-RefRad_208Pb206Pb_Factor*["232Th238U_RM"]))^2+((1/[%"208/206"]-RefRad_208Pb206Pb_Factor*["232Th238U_RM"])+DefCom_206Pb204Pb/(DefCom_208Pb204Pb-DefCom_206Pb204Pb*RefRad_208Pb206Pb_Factor*["232Th238U_RM"]))*RefRad_208Pb206Pb_Factor*["232Th238U_RM"]*[%"232Th238U_RM"]))^2),false)

Notes:

RM spots: 208Pb-corrected 206Pb/238U calibration constant. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

WtdAv_8cor_206Pb238U_CalibConst

$$\text{WtdMeanACalc} \left(8\text{cor_206Pb238U_CalibConst}, (8\text{cor_206Pb238U_CalibConst}) \right)$$

WtdAv_8cor_206Pb238U_CalibConst is not a reference material value

WtdAv_8cor_206Pb238U_CalibConst is not a parameter value

WtdAv_8cor_206Pb238U_CalibConst is healthy

WtdAv_8cor_206Pb238U_CalibConst is not Squid Switch NU

Excel Expression String: WtdMeanACalc(["8cor_206Pb238U_CalibConst"],[%"8cor_206Pb238U_CalibConst"],FALSE,FALSE)

Notes:

RM dataset: Weighted mean of 208Pb-corrected 206Pb/238U calibration constants. Calculated solely in U-Pb Tasks

that calculate only a single 206Pb/238U calibration ("Perm1").

8cor_206Pb238U_Ext1SigmaErr_Pct

$$\max \left(ExtPErr, \frac{\text{WtdAv_8cor_206Pb238U_CalibConst}[1]}{\text{WtdAv_8cor_206Pb238U_CalibConst}} * 100 \right)$$

8cor_206Pb238U_Ext1SigmaErr_Pct is not a reference material value
8cor_206Pb238U_Ext1SigmaErr_Pct is not a parameter value
8cor_206Pb238U_Ext1SigmaErr_Pct is healthy
8cor_206Pb238U_Ext1SigmaErr_Pct is not Squid Switch NU

Excel Expression String: Max(ExtPErr,["WtdAv_8cor_206Pb238U_CalibConst"] [1] /
["WtdAv_8cor_206Pb238U_CalibConst"] [0] * 100)

Notes:

RM dataset: Calculated external (spot-to-spot) 1sigma uncertainty (expressed as a percentage), derived from WtdAv_8cor_206Pb238U_CalibConst, subject to a user-defined minimum value. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

Yb_bwt

$$\text{sqBiweight} \left(\frac{190_{\text{YbO}}}{195.8_{\text{Zr}}}, 9 \right)$$

Yb_bwt is not a reference material value
Yb_bwt is not a parameter value
Yb_bwt is healthy
Yb_bwt is not Squid Switch NU

Excel Expression String: sqBiweight(["190/195.8"],9)

Notes:

No notes

Ybsen

$$\frac{69.85}{\text{Yb_bwt}}$$

Ybsen is not a reference material value
Ybsen is not a parameter value
Ybsen is healthy
Ybsen is not Squid Switch NU

Excel Expression String: 69.85 / ["Yb_bwt"]

Notes:

No notes

Ybsens1sigabserror

$$\frac{\text{Yb_bwt}[1]}{\text{Yb_bwt}} * \text{Ybsen}$$

Ybsens1sigabserror is not a reference material value
Ybsens1sigabserror is not a parameter value
Ybsens1sigabserror is healthy
Ybsens1sigabserror is not Squid Switch NU

Excel Expression String: ["Yb_bwt21"]/[{"Yb_bwt"}*{"Ybsen"}]

Notes:
No notes

Hf_bwt

$$\text{sqBiweight} \left(\frac{195.9_{\text{HfO}}}{195.8_{\text{Zr}}}, 9 \right)$$

Hf_bwt is not a reference material value
Hf_bwt is not a parameter value
Hf_bwt is healthy
Hf_bwt is not Squid Switch NU

Excel Expression String: sqBiweight(["195.9/195.8"],9)

Notes:
No notes

Hfsens

$$\frac{8200}{\text{Hf_bwt}}$$

Hfsens is not a reference material value
Hfsens is not a parameter value
Hfsens is healthy
Hfsens is not Squid Switch NU

Excel Expression String: 8200/["Hf_bwt"]

Notes:
No notes

Hfsens1sigabs

$$\frac{\text{Hf_bwt}[1]}{\text{Hf_bwt}} * \text{Hfsens}$$

Hfsens1sigabs is not a reference material value
Hfsens1sigabs is not a parameter value
Hfsens1sigabs is healthy
Hfsens1sigabs is not Squid Switch NU

Excel Expression String: ["Hf_bwt21"]/[{"Hf_bwt"}*["Hfsens"]]

Notes:

No notes

MassFract.Factor

Massfrac

MassFract.Factor is not a reference material value

MassFract.Factor is not a parameter value

MassFract.Factor is healthy

MassFract.Factor is not Squid Switch NU

Excel Expression String: Massfrac

Notes:

No notes

7cor_Com206Pb_Pct_RM

100 * DefCom_206Pb204Pb * 204Pb206Pb_From207Pb

7cor_Com206Pb_Pct_RM is not a reference material value

7cor_Com206Pb_Pct_RM is not a parameter value

7cor_Com206Pb_Pct_RM is healthy

7cor_Com206Pb_Pct_RM is not Squid Switch NU

Excel Expression String: 100*DefCom_206Pb204Pb*["204Pb206Pb_From207Pb"]

Notes:

RM spots: Common 206Pb as a percentage of total 206Pb, based on the 207Pb-correction.

8cor_Com206Pb_Pct_RM

100 * DefCom_206Pb204Pb * 204Pb206Pb_From208Pb

8cor_Com206Pb_Pct_RM is not a reference material value

8cor_Com206Pb_Pct_RM is not a parameter value

8cor_Com206Pb_Pct_RM is healthy

8cor_Com206Pb_Pct_RM is not Squid Switch NU

Excel Expression String: 100*DefCom_206Pb204Pb*["204Pb206Pb_From208Pb"]

Notes:

RM spots: Common 206Pb as a percentage of total 206Pb, based on the 208Pb-correction.

Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

Total_207Pb206Pb

$$\frac{^{207}\text{Pb}}{^{206}\text{Pb}}$$

Total_207Pb206Pb is not a reference material value

Total_207Pb206Pb is not a parameter value

Total_207Pb206Pb is healthy

Total_207Pb206Pb is not Squid Switch NU

Excel Expression String: ["207/206"]

Notes:

Sample spots: Measured 207Pb/206Pb.

7cor_206Pb238U_Age

$$\text{Age7corrWithErr} \left(\text{Total_206Pb238U}, \frac{(\text{Total_206Pb238U})\%}{100} * T \right)$$

7cor_206Pb238U_Age is not a reference material value

7cor_206Pb238U_Age is not a parameter value

7cor_206Pb238U_Age is healthy

7cor_206Pb238U_Age is not Squid Switch NU

Excel Expression String: Age7corrWithErr(["Total_206Pb238U"],[% "Total_206Pb238U"]/100*
["Total_206Pb238U"],["Total_207Pb206Pb"],[# "Total_207Pb206Pb"])

Notes:

Sample spots: 207Pb-corrected 206Pb/238U age.

7cor_204Pb206Pb

$$\text{Pb46cor7} \left(\frac{^{207}\text{Pb}}{^{206}\text{Pb}}, 7\text{cor_206Pb238U_Age} \right)$$

7cor_204Pb206Pb is not a reference material value

7cor_204Pb206Pb is not a parameter value

7cor_204Pb206Pb is healthy

7cor_204Pb206Pb is not Squid Switch NU

Excel Expression String: Pb46cor7(["207/206"],["7cor_206Pb238U_Age"])

Notes:

Sample spots: 204Pb/206Pb corrected for biweight mean of overcounts at mass 204, based on counts at 207Pb in the RM dataset.

7cor_Com206Pb_Pct

$$100 * \text{DefCom_206Pb204Pb} * 7\text{cor_204Pb206Pb}$$

7cor_Com206Pb_Pct is not a reference material value
7cor_Com206Pb_Pct is not a parameter value
7cor_Com206Pb_Pct is healthy
7cor_Com206Pb_Pct is not Squid Switch NU

Excel Expression String: 100*DefCom_206Pb204Pb*["7cor_204Pb206Pb"]

Notes:

Sample spots: Common 206Pb as a percentage of total 206Pb, based on the 207Pb-correction.

8cor_206Pb238U_Age

$$\text{Age8corrWithErr} \left(\text{Total_206Pb238U}, \frac{(\text{Total_206Pb238U})\%}{100} * T \right)$$

8cor_206Pb238U_Age is not a reference material value
8cor_206Pb238U_Age is not a parameter value
8cor_206Pb238U_Age is healthy
8cor_206Pb238U_Age is not Squid Switch NU

Excel Expression String: Age8corrWithErr(["Total_206Pb238U"],[% "Total_206Pb238U"]/100*["Total_206Pb238U"],["Total_208Pb232Th"],[% "Total_208Pb232Th"]/100*["Total_208Pb232Th"],["232Th238U"],[# "232Th238U"])

Notes:

Sample spots: 208Pb-corrected 206Pb/238U age.

8cor_204Pb206Pb

$$\text{Pb46cor8} \left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}}, 232\text{Th}238\text{U}, 8\text{cor_206Pb238U_Age} \right)$$

8cor_204Pb206Pb is not a reference material value
8cor_204Pb206Pb is not a parameter value
8cor_204Pb206Pb is healthy
8cor_204Pb206Pb is not Squid Switch NU

Excel Expression String: Pb46cor8(["208/206"], ["232Th238U"], ["8cor_206Pb238U_Age"])

Notes:

Sample spots: 204Pb/206Pb corrected for biweight mean of overcounts at /n mass 204, based on counts at 208Pb in the RM dataset.

8cor_Com206Pb_Pct

$$100 * \text{DefCom_206Pb204Pb} * 8\text{cor_204Pb206Pb}$$

8cor_Com206Pb_Pct is not a reference material value
8cor_Com206Pb_Pct is not a parameter value

8cor_Com206Pb_Pct is healthy
8cor_Com206Pb_Pct is not Squid Switch NU

Excel Expression String: 100*DefCom_206Pb204Pb*["8cor_204Pb206Pb"]

Notes:

Sample spots: Common 206Pb as a percentage of total 206Pb, based on the 208Pb-correction.

4cor_206Pb238U_Age_RM

ValueModel

$$\left(\ln \left(1.0 + \frac{4\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_4cor_206Pb238U_CalibConst}} * \text{RefRad_20} \right) \right) / \text{Lambda238}$$

4cor_206Pb238U_Age_RM is not a reference material value

4cor_206Pb238U_Age_RM is not a parameter value

4cor_206Pb238U_Age_RM is healthy

4cor_206Pb238U_Age_RM is not Squid Switch NU

Excel Expression String: ValueModel(LN(1.0+["4cor_206Pb238U_CalibConst"]/["WtdAv_4cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238,[%" 4cor_206Pb238U_CalibConst"]/100*(EXP(Lambda238*LN(1.0+["4cor_206Pb238U_CalibConst"]/["WtdAv_4cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238)-1)/Lambda238/EXP (Lambda238*LN(1.0+["4cor_206Pb238U_CalibConst"]/["WtdAv_4cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238),true)

Notes:

RM spots: 204Pb-corrected 206Pb/238U age. Calculated for RMs in all Tasks except Th-Pb Tasks that calculate only a single 208Pb/232Th calibration ("Perm3").

7cor_206Pb238U_Age_RM

ValueModel

$$\left(\ln \left(1.0 + \frac{7\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_7cor_206Pb238U_CalibConst}} * \text{RefRad_20} \right) \right) / \text{Lambda238}$$

7cor_206Pb238U_Age_RM is not a reference material value
 7cor_206Pb238U_Age_RM is not a parameter value
 7cor_206Pb238U_Age_RM is healthy
 7cor_206Pb238U_Age_RM is not Squid Switch NU

Excel Expression String: ValueModel(LN(1.0+["7cor_206Pb238U_CalibConst"]/["WtdAv_7cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238,[%" 7cor_206Pb238U_CalibConst"]/100*(EXP(Lambda238*LN(1.0+["7cor_206Pb238U_CalibConst"]/["WtdAv_7cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238)-1)/Lambda238/EXP(Lambda238*LN(1.0+["7cor_206Pb238U_CalibConst"]/["WtdAv_7cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238),true)

Notes:

RM spots: 207Pb-corrected 206Pb/238U age

8cor_206Pb238U_Age_RM

$$\text{ValueModel} \left(\frac{\ln \left(1.0 + \frac{8\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_8cor_206Pb238U_CalibConst}} * \text{RefRad_206Pb238U} \right)}{\text{Lambda238}} \right)$$

8cor_206Pb238U_Age_RM is not a reference material value
 8cor_206Pb238U_Age_RM is not a parameter value
 8cor_206Pb238U_Age_RM is healthy
 8cor_206Pb238U_Age_RM is not Squid Switch NU

Excel Expression String: ValueModel(LN(1.0+["8cor_206Pb238U_CalibConst"]/["WtdAv_8cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238,[%" 8cor_206Pb238U_CalibConst"]/100*(EXP(Lambda238*LN(1.0+["8cor_206Pb238U_CalibConst"]/["WtdAv_8cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238)-1)/Lambda238/EXP(Lambda238*LN(1.0+["8cor_206Pb238U_CalibConst"]/["WtdAv_8cor_206Pb238U_CalibConst"])[0]*RefRad_206Pb238U)/Lambda238),true)

Notes:

RM spots: 208Pb-corrected 206Pb/238U age. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

4cor_207Pb206Pb_RM

$$\text{ValueModel} = \frac{\left(\frac{207\text{Pb}}{206\text{Pb}} - \text{DefCom_207Pb204Pb} \right)}{\left(\frac{1}{204\text{Pb}} - \text{DefCom_206Pb204Pb} \right)}, \sqrt{\left(\frac{207\text{Pb}}{206\text{Pb}} * \left(\frac{207\text{Pb}}{206\text{Pb}} - \text{DefCom_207Pb204Pb} \right) \right) + \left(\frac{1}{204\text{Pb}} * \left(\frac{1}{204\text{Pb}} - \text{DefCom_206Pb204Pb} \right) \right)}$$

4cor_207Pb206Pb_RM is not a reference material value

4cor_207Pb206Pb_RM is not a parameter value

4cor_207Pb206Pb_RM is healthy

4cor_207Pb206Pb_RM is not Squid Switch NU

Excel Expression String: ValueModel(([207/206]/[204/206]-DefCom_207Pb204Pb)/(1/[204/206]-DefCom_206Pb204Pb),sqrt(((207/206)*[%207/206])^2+([204/206]*(([207/206]/[204/206])-DefCom_207Pb204Pb)/(1/[204/206]-DefCom_206Pb204Pb) * DefCom_206Pb204Pb-DefCom_207Pb204Pb) *[%204/206])^2)/([207/206]-[204/206]*DefCom_207Pb204Pb)^2),false)

Notes:

RM spots: 204Pb-corrected 207Pb/206Pb ratio. Calculated for RMs in all Tasks.

4cor_207Pb206Pb_Age_RM

$$\text{AgePb76WithErr} \left(4\text{cor_207Pb206Pb_RM}, \frac{4\text{cor_207Pb206Pb_RM}}{4\text{cor_207Pb206Pb_RM}} \right)$$

4cor_207Pb206Pb_Age_RM is not a reference material value

4cor_207Pb206Pb_Age_RM is not a parameter value

4cor_207Pb206Pb_Age_RM is healthy

4cor_207Pb206Pb_Age_RM is not Squid Switch NU

Excel Expression String: AgePb76WithErr(["4cor_207Pb206Pb_RM"],(["4cor_207Pb206Pb_RM"]*[%207Pb206Pb_RM])/100))

Notes:

RM spots: 204Pb-corrected 207Pb/206Pb age. Calculated for RMs in all Tasks.

204OvCts_From207Pb

$$\text{TotalCps}(204\text{Pb}) - \text{TotalCps}(\text{BKG}_{\text{Bkgnd}}) - 204\text{Pb206Pb_From207Pb}$$

204OvCts_From207Pb is not a reference material value

204OvCts_From207Pb is not a parameter value

204OvCts_From207Pb is healthy

204OvCts_From207Pb is not Squid Switch NU

Excel Expression String: TotalCps(["204"])-TotalCps(["BKG"])-["204Pb206Pb_From207Pb"]*(TotalCps(["206"])-TotalCps(["BKG"]))

Notes:

RM spots: Overcounts per second at mass 204, based on counts at 207Pb.

BiWt_204OvCts_From207Pb

sqBiweight (204OvCts_From207Pb, 9)

BiWt_204OvCts_From207Pb is not a reference material value

BiWt_204OvCts_From207Pb is not a parameter value

BiWt_204OvCts_From207Pb is healthy

BiWt_204OvCts_From207Pb is not Squid Switch NU

Excel Expression String: sqBiweight(["204OvCts_From207Pb"],9)

Notes:

RM dataset: Biweight mean of values of overcounts-per-second at mass 204, based on counts at 207Pb in the RM.

204OvCts_From208Pb

TotalCps (204_{Pb}) – TotalCps (BKG_{Bkgrnd}) – 204Pb206Pb_From208Pb

204OvCts_From208Pb is not a reference material value

204OvCts_From208Pb is not a parameter value

204OvCts_From208Pb is healthy

204OvCts_From208Pb is not Squid Switch NU

Excel Expression String: TotalCps(["204"])-TotalCps(["BKG"])-["204Pb206Pb_From208Pb"]*(TotalCps(["206"])-TotalCps(["BKG"]))

Notes:

RM spots: Overcounts per second at mass 204, based on counts at 208Pb.

In dual-calibration Tasks (i.e. "Perm2" and "Perm4"),

this value depends on the index isotope (204Pb or 207Pb)

chosen for the common Pb correction.

BiWt_204OvCts_From208Pb

sqBiweight (204OvCts_From208Pb, 9)

BiWt_204OvCts_From208Pb is not a reference material value
BiWt_204OvCts_From208Pb is not a parameter value
BiWt_204OvCts_From208Pb is healthy
BiWt_204OvCts_From208Pb is not Squid Switch NU

Excel Expression String: sqBiweight(["204OvCts_From208Pb"],9)

Notes:

RM dataset: Biweight mean of values of overcounts-per-second at mass 204, based on counts at 208Pb.
In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

7cor_PrimaryCalibConstDelta_Pct

$$100 * \left(\frac{\left(1 - \text{DefCom_206Pb204Pb} * \frac{204_{\text{Pb}}}{206_{\text{Pb}}} \right)}{\left(1 - \text{DefCom_206Pb204Pb} * 204\text{Pb}206\text{Pb_From207Pb} \right)} - 1 \right)$$

7cor_PrimaryCalibConstDelta_Pct is not a reference material value
7cor_PrimaryCalibConstDelta_Pct is not a parameter value
7cor_PrimaryCalibConstDelta_Pct is healthy
7cor_PrimaryCalibConstDelta_Pct is not Squid Switch NU

Excel Expression String: $100 * ((1 - \text{DefCom_206Pb204Pb} * ["204/206"]) / (1 - \text{DefCom_206Pb204Pb} * ["204Pb206Pb_From207Pb"]) - 1)$

Notes:

RM spots: Offset (expressed as a percentage) of the primary calibration constant, based on overcounts at mass 204 as calculated from counts at 207Pb.

BiWt_7cor_PrimaryCalibConstDelta_Pct

sqBiweight (7cor_PrimaryCalibConstDelta_Pct, 9)

BiWt_7cor_PrimaryCalibConstDelta_Pct is not a reference material value
BiWt_7cor_PrimaryCalibConstDelta_Pct is not a parameter value
BiWt_7cor_PrimaryCalibConstDelta_Pct is healthy
BiWt_7cor_PrimaryCalibConstDelta_Pct is not Squid Switch NU

Excel Expression String: sqBiweight(["7cor_PrimaryCalibConstDelta_Pct"],9)

Notes:

RM dataset: Biweight mean of offsets (expressed as percentages) of the primary calibration constant, based on overcounts at mass 204 as calculated from counts at 207Pb.

8cor_PrimaryCalibConstDelta_Pct

$$100 * \left(\frac{\left(1 - \text{DefCom_206Pb204Pb} * \frac{^{204}\text{Pb}}{^{206}\text{Pb}} \right)}{\left(1 - \text{DefCom_206Pb204Pb} * 204\text{Pb206Pb_From208Pb} \right)} - \right)$$

8cor_PrimaryCalibConstDelta_Pct is not a reference material value

8cor_PrimaryCalibConstDelta_Pct is not a parameter value

8cor_PrimaryCalibConstDelta_Pct is healthy

8cor_PrimaryCalibConstDelta_Pct is not Squid Switch NU

Excel Expression String: $100*((1-\text{DefCom_206Pb204Pb}*["204/206"])/(1-\text{DefCom_206Pb204Pb}*["204Pb206Pb_From208Pb"])-1)$

Notes:

RM spots: Offset (expressed as a percentage) of the primary calibration constant, based on overcounts at mass 204 as calculated from counts at 208Pb.

In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

BiWt_8cor_PrimaryCalibConstDelta_Pct

sqBiweight (8cor_PrimaryCalibConstDelta_Pct, 9)

BiWt_8cor_PrimaryCalibConstDelta_Pct is not a reference material value

BiWt_8cor_PrimaryCalibConstDelta_Pct is not a parameter value

BiWt_8cor_PrimaryCalibConstDelta_Pct is healthy

BiWt_8cor_PrimaryCalibConstDelta_Pct is not Squid Switch NU

Excel Expression String: sqBiweight(["8cor_PrimaryCalibConstDelta_Pct"],9)

Notes:

RM dataset: Biweight mean of offsets (expressed as percentages) of the primary calibration constant, based on overcounts at mass 204 as calculated from counts at 208Pb. In dual-calibration Tasks (i.e. "Perm2" and "Perm4"), this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

BiWt_4cor_207Pb206Pb_Age

sqBiweight (4cor_207Pb206Pb_Age_RM, 9)

BiWt_4cor_207Pb206Pb_Age is not a reference material value

BiWt_4cor_207Pb206Pb_Age is not a parameter value

BiWt_4cor_207Pb206Pb_Age is healthy

BiWt_4cor_207Pb206Pb_Age is not Squid Switch NU

Excel Expression String: sqBiweight(["4cor_207Pb206Pb_Age_RM"],9)

Notes:

RM dataset: Biweight mean of 204Pb-corrected 207Pb/206Pb ages.

4cor_206Pb238U_RM

$$\text{ValueModel} \left(\frac{4\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_4cor_206Pb238U_CalibConst}} * \text{RefRad_} \right)$$

4cor_206Pb238U_RM is not a reference material value

4cor_206Pb238U_RM is not a parameter value

4cor_206Pb238U_RM is healthy

4cor_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["4cor_206Pb238U_CalibConst"]/
["WtdAv_4cor_206Pb238U_CalibConst"][0]*RefRad_206Pb238U,[%"4cor_206Pb238U_CalibConst"],
false)

Notes:

RM spots: 204Pb-corrected 206Pb/238U ratio. Calculated for RMs in all Tasks.

7cor_Total_206Pb238U_RM

$$\text{ValueModel} \left(\frac{\text{Uncor_206Pb238U_CalibConst}}{\text{WtdAv_7cor_206Pb238U_CalibConst}} * \text{RefRad_} \right)$$

7cor_Total_206Pb238U_RM is not a reference material value

7cor_Total_206Pb238U_RM is not a parameter value

7cor_Total_206Pb238U_RM is healthy

7cor_Total_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_7cor_206Pb238U_CalibConst"][0]*RefRad_206Pb238U,SQRT([%"
Uncor_206Pb238U_CalibConst"]^2+["7cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

RM spots: Calculated total 206Pb/238U. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

8cor_Total_206Pb238U_RM

$$\text{ValueModel} \left(\frac{\text{Uncor_206Pb238U_CalibConst}}{\text{WtdAv_8cor_206Pb238U_CalibConst}} * \text{RefRad_} \right)$$

8cor_Total_206Pb238U_RM is not a reference material value

8cor_Total_206Pb238U_RM is not a parameter value

8cor_Total_206Pb238U_RM is healthy

8cor_Total_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_8cor_206Pb238U_CalibConst"][0]*RefRad_206Pb238U,SQRT([%"
Uncor_206Pb238U_CalibConst"]^2+["8cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

RM spots: Calculated total 206Pb/238U. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

Av_ParentElement_ConcenConst

CalculateMeanConcStd (ParentElement_ConcenConst)

Av_ParentElement_ConcenConst is not a reference material value

Av_ParentElement_ConcenConst is not a parameter value

Av_ParentElement_ConcenConst is healthy

Av_ParentElement_ConcenConst is not Squid Switch NU

Excel Expression String: CalculateMeanConcStd(["ParentElement_ConcenConst"])

Notes:

CM spots: Arithmetic mean of Parent Element concentration constants (for nominated Parent Element), as measured SOLELY on CM.

U_Concen

$$\frac{\text{ParentElement_ConcenConst}}{\text{Av_ParentElement_ConcenConst}} * \text{Ref_U_Concen}$$

U_Concen is not a reference material value

U_Concen is not a parameter value

U_Concen is healthy

U_Concen is not Squid Switch NU

Excel Expression String: ["ParentElement_ConcenConst"]/[("Av_ParentElement_ConcenConst")]
*Ref_U_Concen

Notes:

Sample spots: Calculated U content.

U_Concen_RM

$$\frac{\text{ParentElement_ConcenConst}}{\text{Av_ParentElement_ConcenConst}} * \text{Ref_U_Concen}$$

U_Concen_RM is not a reference material value

U_Concen_RM is not a parameter value

U_Concen_RM is healthy

U_Concen_RM is not Squid Switch NU

Excel Expression String: ["ParentElement_ConcenConst"]/[("Av_ParentElement_ConcenConst")]
*Ref_U_Concen

Notes:

RM spots: Calculated U content. In dual-calibration Tasks (i.e. "Perm2" and "Perm4") where the CM is defined in terms of its Th content, this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

Th_Concen_RM

U_Concen_RM * 232Th238U_RM

L1033

Th_Concen_RM is not a reference material value

Th_Concen_RM is not a parameter value

Th_Concen_RM is healthy

Th_Concen_RM is not Squid Switch NU

Excel Expression String: ["U_Concen_RM"]*["232Th238U_RM"]/L1033

Notes:

RM spots: Calculated Th content. In dual-calibration Tasks (i.e. "Perm2" and "Perm4") where the CM is defined in terms of its U content, this value depends on the index isotope (204Pb or 207Pb) chosen for the common Pb correction.

Th_Concen

U_Concen * 232Th238U

L1033

Th_Concen is not a reference material value

Th_Concen is not a parameter value

Th_Concen is healthy

Th_Concen is not Squid Switch NU

Excel Expression String: ["U_Concen"]*["232Th238U"]/L1033

Notes:

Sample spots: Calculated Th content.

4cor_207Pb235U_RM

ValueModel
$$\left(4\text{cor_207Pb206Pb_RM} * 4\text{cor_206Pb238U_RM} * \right)$$

4cor_207Pb235U_RM is not a reference material value

4cor_207Pb235U_RM is not a parameter value

4cor_207Pb235U_RM is healthy

4cor_207Pb235U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["4cor_207Pb206Pb_RM"]*["4cor_206Pb238U_RM"]*Present_238U235U,sqrt[% "4cor_206Pb238U_RM"]^2+[%"4cor_207Pb206Pb_RM"]^2),false)

Notes:

RM spots: 204Pb-corrected 207Pb/235U ratio. Calculated for RMs in all Tasks.

4cor_ErrCorrel_RM

$$\frac{(4\text{cor_206Pb238U_RM})\%}{(4\text{cor_207Pb235U_RM})\%}$$

4cor_ErrCorrel_RM is not a reference material value

4cor_ErrCorrel_RM is not a parameter value

4cor_ErrCorrel_RM is healthy

4cor_ErrCorrel_RM is not Squid Switch NU

Excel Expression String: [% "4cor_206Pb238U_RM"]/[%"4cor_207Pb235U_RM"]

Notes:

RM spots: Error correlation (for Wetherill concordia plot) between 204Pb-corrected values of 207Pb/235U and 206Pb/238U.

7cor_206Pb238U_RM

$$\text{ValueModel} \left(\frac{7\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_7cor_206Pb238U_CalibConst}} * \text{RefRad_} \right)$$

7cor_206Pb238U_RM is not a reference material value

7cor_206Pb238U_RM is not a parameter value

7cor_206Pb238U_RM is healthy

7cor_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["7cor_206Pb238U_CalibConst"]/[%"7cor_206Pb238U_CalibConst"]*,false)

Notes:

RM spots: 207Pb-corrected 206Pb/238U

8cor_206Pb238U_RM

$$\text{ValueModel} \left(\frac{8\text{cor_206Pb238U_CalibConst}}{\text{WtdAv_8cor_206Pb238U_CalibConst}} * \text{RefRad_} \right)$$

8cor_206Pb238U_RM is not a reference material value

8cor_206Pb238U_RM is not a parameter value

8cor_206Pb238U_RM is healthy

8cor_206Pb238U_RM is not Squid Switch NU

Excel Expression String: ValueModel(["8cor_206Pb238U_CalibConst"]/
["WtdAv_8cor_206Pb238U_CalibConst"][0]*RefRad_206Pb238U,[%"8cor_206Pb238U_CalibConst"],
false)

Notes:

RM spots: 208Pb-corrected 206Pb/238U. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

8cor_207Pb235U_RM

Rad8corPb7U5WithErr $\left(\begin{array}{l} \text{Total_206Pb238U_RM}, (\text{Total_206Pb} \\ \end{array} \right)$

8cor_207Pb235U_RM is not a reference material value

8cor_207Pb235U_RM is not a parameter value

8cor_207Pb235U_RM is healthy

8cor_207Pb235U_RM is not Squid Switch NU

Excel Expression String: Rad8corPb7U5WithErr(["Total_206Pb238U_RM"],[% "Total_206Pb238U_RM"],["8cor_206Pb238U_RM"],["Total_206Pb238U_RM"]*["207/206"]/
[Present_238U235U,["232Th238U_RM"],[% "232Th238U_RM"],["207/206"],[% "207/206"],["208/206"],[% "208/206"]])

Notes:

RM spots: 208Pb-corrected 207Pb/235U. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

8cor_ErrCorrel_RM

Rad8corConcRho $\left(\begin{array}{l} \text{Total_206Pb238U_RM}, (\text{Total_206Pb238U_} \\ \end{array} \right)$

8cor_ErrCorrel_RM is not a reference material value

8cor_ErrCorrel_RM is not a parameter value

8cor_ErrCorrel_RM is healthy

8cor_ErrCorrel_RM is not Squid Switch NU

Excel Expression String: Rad8corConcRho(["Total_206Pb238U_RM"],[% "Total_206Pb238U_RM"],
["8cor_206Pb238U_RM"],["232Th238U_RM"],[% "232Th238U_RM"],["207/206"],[% "207/206"],["208/206"],[% "208/206"])

Notes:

RM spots: Error correlation (for Wetherill concordia plot) between 208Pb-corrected values of 207Pb/235U and 206Pb/238U. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

8cor_207Pb206Pb_RM

$$\text{ValueModel} \left(\frac{\frac{8\text{cor_207Pb235U_RM}}{8\text{cor_206Pb238U_RM}}}{\text{Present_238U235U}}, \sqrt{\left(\frac{8\text{cor_207Pb235U_RM}}{8\text{cor_206Pb238U_RM}} \right)^2 + \left(\frac{8\text{cor_206Pb238U_RM}}{8\text{cor_207Pb235U_RM}} \right)^2 - 2 * \left(\frac{8\text{cor_207Pb235U_RM}}{8\text{cor_206Pb238U_RM}} \right) * \left(\frac{8\text{cor_206Pb238U_RM}}{8\text{cor_207Pb235U_RM}} \right) * \left[\text{8cor_ErrCorrel_RM} \right]} \right)$$

8cor_207Pb206Pb_RM is not a reference material value

8cor_207Pb206Pb_RM is not a parameter value

8cor_207Pb206Pb_RM is healthy

8cor_207Pb206Pb_RM is not Squid Switch NU

Excel Expression String: ValueModel(["8cor_207Pb235U_RM"]/[["8cor_206Pb238U_RM"]]/["Present_238U235U"],SQRT([%"8cor_207Pb235U_RM"]^2+[%"8cor_206Pb238U_RM"]^2-2*[%"8cor_207Pb235U_RM"]*[%"8cor_206Pb238U_RM"]*[%"8cor_ErrCorrel_RM"]),false)

Notes:

RM spots: 208Pb-corrected 207Pb/206Pb. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

8cor_207Pb206Pb_Age_RM

$$\text{AgePb76WithErr} \left(8\text{cor_207Pb206Pb_RM}, \frac{8\text{cor_207Pb206Pb_RM}}{8\text{cor_207Pb206Pb_RM}} \right)$$

8cor_207Pb206Pb_Age_RM is not a reference material value

8cor_207Pb206Pb_Age_RM is not a parameter value

8cor_207Pb206Pb_Age_RM is healthy

8cor_207Pb206Pb_Age_RM is not Squid Switch NU

Excel Expression String: AgePb76WithErr(["8cor_207Pb206Pb_RM"],(["8cor_207Pb206Pb_RM"]*[%"8cor_207Pb206Pb_RM"]/100))

Notes:

RM spots: 208Pb-corrected 207Pb/206Pb age. Calculated solely in U-Pb Tasks that calculate only a single 206Pb/238U calibration ("Perm1").

Total_206Pb204Pb

$$\frac{1}{\frac{204_{\text{Pb}}}{206_{\text{Pb}}}}$$

Total_206Pb204Pb is not a reference material value

Total_206Pb204Pb is not a parameter value

Total_206Pb204Pb is healthy

Total_206Pb204Pb is not Squid Switch NU

Excel Expression String: 1/["204/206"]

Notes:

Sample spots: Measured 206Pb/204Pb.

DefRad_206Pb204Pb

Total_206Pb204Pb – DefCom_206Pb204Pb

DefRad_206Pb204Pb is not a reference material value

DefRad_206Pb204Pb is not a parameter value

DefRad_206Pb204Pb is healthy

DefRad_206Pb204Pb is not Squid Switch NU

Excel Expression String: Total_206Pb204Pb-DefCom_206Pb204Pb

Notes:

Sample spots: Default (radiogenic 206Pb)/204Pb, defined as (Total_206Pb204Pb) - (DefCom_206Pb204Pb).

Total_207Pb204Pb

$$\frac{^{207}\text{Pb}}{^{206}\text{Pb}}$$
$$\frac{^{204}\text{Pb}}{^{206}\text{Pb}}$$

Total_207Pb204Pb is not a reference material value

Total_207Pb204Pb is not a parameter value

Total_207Pb204Pb is healthy

Total_207Pb204Pb is not Squid Switch NU

Excel Expression String: ["207/206"]/["204/206"]

Notes:

Sample spots: Measured 207Pb/204Pb.

DefRad_207Pb204Pb

Total_207Pb204Pb – DefCom_207Pb204Pb

DefRad_207Pb204Pb is not a reference material value

DefRad_207Pb204Pb is not a parameter value

DefRad_207Pb204Pb is healthy

DefRad_207Pb204Pb is not Squid Switch NU

Excel Expression String: Total_207Pb204Pb-DefCom_207Pb204Pb

Notes:

Sample spots: Default (radiogenic 207Pb)/204Pb, defined as (Total_207Pb204Pb) - (DefCom_207Pb204Pb).

Total_208Pb204Pb

208_{Pb}

206_{Pb}

204_{Pb}

206_{Pb}

Total_208Pb204Pb is not a reference material value

Total_208Pb204Pb is not a parameter value

Total_208Pb204Pb is healthy

Total_208Pb204Pb is not Squid Switch NU

Excel Expression String: ["208/206"]/"204/206"]

Notes:

Sample spots: Measured 208Pb/204Pb.

DefRad_208Pb204Pb

Total_208Pb204Pb – DefCom_208Pb204Pb

DefRad_208Pb204Pb is not a reference material value

DefRad_208Pb204Pb is not a parameter value

DefRad_208Pb204Pb is healthy

DefRad_208Pb204Pb is not Squid Switch NU

Excel Expression String: Total_208Pb204Pb-DefCom_208Pb204Pb

Notes:

Sample spots: Default (radiogenic 208Pb)/204Pb, defined as (Total_208Pb204Pb) - (DefCom_208Pb204Pb).

Rad_206Pb204Pb_Factor

DefRad_206Pb204Pb

—————
Total_206Pb204Pb

Rad_206Pb204Pb_Factor is not a reference material value

Rad_206Pb204Pb_Factor is not a parameter value

Rad_206Pb204Pb_Factor is healthy

Rad_206Pb204Pb_Factor is not Squid Switch NU

Excel Expression String: DefRad_206Pb204Pb/Total_206Pb204Pb

Notes:

Sample spots: Radiogenic 206Pb/204Pb proportionality factor, defined as (DefRad_206Pb204Pb)/(Total_206Pb204Pb).

Rad_208Pb204Pb_Factor

DefRad_208Pb204Pb

—————
Total_208Pb204Pb

Rad_208Pb204Pb_Factor is not a reference material value

Rad_208Pb204Pb_Factor is not a parameter value

Rad_208Pb204Pb_Factor is healthy

Rad_208Pb204Pb_Factor is not Squid Switch NU

Excel Expression String: DefRad_208Pb204Pb/Total_208Pb204Pb

Notes:

Sample spots: Radiogenic 208Pb/204Pb proportionality factor, defined as (DefRad_208Pb204Pb)/(Total_208Pb204Pb).

7cor_Total_206Pb238U

$$\text{ValueModel} \left(\frac{\text{Uncor_206Pb238U_CalibConst}}{\text{WtdAv_7cor_206Pb238U_CalibConst}} * \text{RefRad_}$$

7cor_Total_206Pb238U is not a reference material value

7cor_Total_206Pb238U is not a parameter value

7cor_Total_206Pb238U is healthy

7cor_Total_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_7cor_206Pb238U_CalibConst"][[0]*RefRad_206Pb238U,SQRT([%"
Uncor_206Pb238U_CalibConst"]^2+["7cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

Sample spots: Calculated total 206Pb/238U. Always depends on the index isotope
(204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

8cor_Total_206Pb238U

$$\text{ValueModel} \left(\frac{\text{Uncor_206Pb238U_CalibConst}}{\text{WtdAv_8cor_206Pb238U_CalibConst}} * \text{RefRad_}$$

8cor_Total_206Pb238U is not a reference material value

8cor_Total_206Pb238U is not a parameter value

8cor_Total_206Pb238U is healthy

8cor_Total_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(["Uncor_206Pb238U_CalibConst"]/
["WtdAv_8cor_206Pb238U_CalibConst"][[0]*RefRad_206Pb238U,SQRT([%"
Uncor_206Pb238U_CalibConst"]^2+["8cor_206Pb238U_Ext1SigmaErr_Pct"]^2),false)

Notes:

Sample spots: Calculated total 206Pb/238U. Always depends on the index isotope
(204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

7cor_206Pb_Concen

$\text{Total}_{\text{206Pb238U}} * \text{U}_{\text{Concen}} * L859 * (1 - 7\text{cor}_{\text{204Pb206Pb}} * \text{DefCom}_{\text{206Pb204Pb}})$

$7\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a reference material value

$7\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a parameter value

$7\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is healthy

$7\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not Squid Switch NU

Excel Expression String: $["\text{Total}_{\text{206Pb238U}}"] * ["\text{U}_{\text{Concen}}"] * L859 * (1 - ["7\text{cor}_{\text{204Pb206Pb}}"] * \text{DefCom}_{\text{206Pb204Pb}})$

Notes:

Sample spots: Radiogenic 206Pb content, based on the 207Pb-correction.

8cor_206Pb_Concen

$\text{Total}_{\text{206Pb238U}} * \text{U}_{\text{Concen}} * L859 * (1 - 8\text{cor}_{\text{204Pb206Pb}} * \text{DefCom}_{\text{206Pb204Pb}})$

$8\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a reference material value

$8\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a parameter value

$8\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is healthy

$8\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not Squid Switch NU

Excel Expression String: $["\text{Total}_{\text{206Pb238U}}"] * ["\text{U}_{\text{Concen}}"] * L859 * (1 - ["8\text{cor}_{\text{204Pb206Pb}}"] * \text{DefCom}_{\text{206Pb204Pb}})$

Notes:

Sample spots: Radiogenic 206Pb content, based on the 208Pb-correction.

4cor_206Pb_Concen

$\text{Total}_{\text{206Pb238U}} * \text{U}_{\text{Concen}} * L859 * \left(1 - \frac{\text{204}_{\text{Pb}}}{\text{206}_{\text{Pb}}} * \text{DefCom}_{\text{206Pb204Pb}}\right)$

$4\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a reference material value

$4\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not a parameter value

$4\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is healthy

$4\text{cor}_{\text{206Pb}}_{\text{Concen}}$ is not Squid Switch NU

Excel Expression String: $["\text{Total}_{\text{206Pb238U}}"] * ["\text{U}_{\text{Concen}}"] * L859 * (1 - [204/206] * \text{DefCom}_{\text{206Pb204Pb}})$

Notes:

Sample spots: Radiogenic 206Pb content, based on the 204Pb-correction.

4cor_208Pb206Pb

ValueModel

$$\left(\frac{\left(\frac{^{208}\text{Pb}}{^{206}\text{Pb}} - \text{DefCom_}208\text{Pb}204\text{Pb} \right)}{\left(\frac{1}{^{204}\text{Pb}} - \text{DefCom_}206\text{Pb}204\text{Pb} \right)}, \frac{100 * \sqrt{\left(\frac{\left(\frac{^{208}\text{Pb}}{^{206}\text{Pb}} \right)}{100} \right)}}{100} \right)$$

4cor_208Pb206Pb is not a reference material value

4cor_208Pb206Pb is not a parameter value

4cor_208Pb206Pb is healthy

4cor_208Pb206Pb is not Squid Switch NU

Excel Expression String: ValueModel(([208/206]/[204/206]-DefCom_208Pb204Pb)/(1/[204/206]-DefCom_206Pb204Pb),100*sqrt((([% "208/206"]/100*[208/206])^2+(([208/206]/[204/206])-DefCom_208Pb204Pb)/(1/[204/206]-DefCom_206Pb204Pb)*DefCom_206Pb204Pb-DefCom_208Pb204Pb)^2*([%"204/206"]/100*[204/206])^2)/(1-DefCom_206Pb204Pb*[204/206])^2)/abs(([208/206]/[204/206]-DefCom_208Pb204Pb)/(1/[204/206]-DefCom_206Pb204Pb)),false)

Notes:

RM and Sample spots: Radiogenic 208Pb/206Pb, based on the 204Pb-correction.

4cor_208Pb_Concen

$$\frac{4\text{cor_}206\text{Pb_Concen} * 4\text{cor_}208\text{Pb}206\text{Pb} * 208}{206}$$

4cor_208Pb_Concen is not a reference material value

4cor_208Pb_Concen is not a parameter value

4cor_208Pb_Concen is healthy

4cor_208Pb_Concen is not Squid Switch NU

Excel Expression String: ["4cor_206Pb_Concen"]*["4cor_208Pb206Pb"]*208/206

Notes:

Sample spots: Radiogenic 208Pb content, based on the 204Pb-correction.

7cor_208Pb206Pb

$$\text{ValueModel} \left(\frac{\left(\frac{\frac{208\text{Pb}}{206\text{Pb}}}{7\text{cor_204Pb206Pb}} - \text{DefCom_208Pb204Pb} \right)}{\left(\frac{1}{7\text{cor_204Pb206Pb}} - \text{DefCom_206Pb204Pb} \right)}, \text{Pb86ra} \right)$$

7cor_208Pb206Pb is not a reference material value

7cor_208Pb206Pb is not a parameter value

7cor_208Pb206Pb is healthy

7cor_208Pb206Pb is not Squid Switch NU

Excel Expression String: ValueModel(([208/206]/[7cor_204Pb206Pb]-DefCom_208Pb204Pb)/(1/[7cor_204Pb206Pb]-DefCom_206Pb204Pb),Pb86radCor7per(["208/206"],["207/206"], ["Total_206Pb238U"],[% "Total_206Pb238U"],[7cor_206Pb238U_Age]),false)

Notes:

Sample spots: Radiogenic 208Pb/206Pb, based on the 207Pb-correction.

7cor_208Pb_Concen

$$\frac{7\text{cor_206Pb_Concen} * 7\text{cor_208Pb206Pb} * 208}{206}$$

7cor_208Pb_Concen is not a reference material value

7cor_208Pb_Concen is not a parameter value

7cor_208Pb_Concen is healthy

7cor_208Pb_Concen is not Squid Switch NU

Excel Expression String: [7cor_206Pb_Concen]*[7cor_208Pb206Pb]*208/206

Notes:

Sample spots: Radiogenic 208Pb content, based on the 207Pb-correction.

4cor_206Pb238U

$$\text{ValueModel} \left(\text{Total_206Pb238U} * \text{Rad_206Pb204Pb_Factor}, \sqrt{\quad} \right)$$

4cor_206Pb238U is not a reference material value

4cor_206Pb238U is not a parameter value

4cor_206Pb238U is healthy

4cor_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U"]*Rad_206Pb204Pb_Factor,SQRT[% "Total_206Pb238U"]^2+(DefCom_206Pb204Pb*[% "204/206"]/(1/[204/206]-DefCom_206Pb204Pb))^ ^2),false)

Notes:

Sample spots: 204Pb-corrected 206Pb/238U.

4cor_238U206Pb

$$\text{ValueModel} \left(\frac{1}{4\text{cor_206Pb238U}}, (\text{4cor_206Pb238U})\%, \text{FALSE} \right)$$

4cor_238U206Pb is not a reference material value

4cor_238U206Pb is not a parameter value

4cor_238U206Pb is healthy

4cor_238U206Pb is not Squid Switch NU

Excel Expression String: ValueModel(1/["4cor_206Pb238U"],[% "4cor_206Pb238U"],false)

Notes:

Sample spots: 204Pb-corrected 238U/206Pb.

4cor_207Pb206Pb

$$\text{ValueModel} \left(\text{abs} \left(\frac{\text{DefRad_207Pb204Pb}}{\text{DefRad_206Pb204Pb}} \right), \text{abs} \left(\sqrt{\frac{\left(\frac{\text{207Pb}}{\text{206Pb}} - \text{abs} \left(\frac{\text{DefRa}}{\text{DefRa}} \right) \right)^2 + \left(\frac{\text{207Pb}}{\text{206Pb}} - \text{abs} \left(\frac{\text{DefRa}}{\text{DefRa}} \right) \right)^2}} \right) \right)$$

4cor_207Pb206Pb is not a reference material value

4cor_207Pb206Pb is not a parameter value

4cor_207Pb206Pb is healthy

4cor_207Pb206Pb is not Squid Switch NU

Excel Expression String: ValueModel(ABS(DefRad_207Pb204Pb/DefRad_206Pb204Pb),ABS(SQRT(((["207/206"]-ABS(DefRad_207Pb204Pb/DefRad_206Pb204Pb))*[% "204/206"]/100/[204/206])^2+([% "207/206"]/[204/206]/100*[207/206])^2)/DefRad_206Pb204Pb*100/ABS(DefRad_207Pb204Pb/DefRad_206Pb204Pb)),false)

Notes:

Sample spots: 204Pb-corrected 207Pb/206Pb.

4cor_207Pb206Pb_Age

$$\text{AgePb76WithErr} \left(\text{4cor_207Pb206Pb}, \frac{\text{4cor_207Pb206Pb} * (4\text{cor_207Pb206Pb})}{100} \right)$$

4cor_207Pb206Pb_Age is not a reference material value

4cor_207Pb206Pb_Age is not a parameter value

4cor_207Pb206Pb_Age is healthy

4cor_207Pb206Pb_Age is not Squid Switch NU

Excel Expression String: AgePb76WithErr(["4cor_207Pb206Pb"],(["4cor_207Pb206Pb"]*[%"4cor_207Pb206Pb"]/100))

Notes:

Sample spots: 204Pb-corrected 207Pb/206Pb age.

4cor_207Pb235U

$$\text{ValueModel} \left(\text{4cor_207Pb206Pb} * \text{4cor_206Pb238U} * \text{Present_238U235U} \right)$$

4cor_207Pb235U is not a reference material value

4cor_207Pb235U is not a parameter value

4cor_207Pb235U is healthy

4cor_207Pb235U is not Squid Switch NU

Excel Expression String: ValueModel(([%"4cor_207Pb206Pb"]*[%"4cor_206Pb238U"]*Present_238U235U),SQRT([%"4cor_207Pb206Pb"]^2+[%"4cor_206Pb238U"]^2),false)

Notes:

Sample spots: 204Pb-corrected 207Pb/235U.

4cor_ErrCorrel

$$\frac{(4\text{cor_206Pb238U})\%}{(4\text{cor_207Pb235U})\%}$$

4cor_ErrCorrel is not a reference material value

4cor_ErrCorrel is not a parameter value

4cor_ErrCorrel is healthy

4cor_ErrCorrel is not Squid Switch NU

Excel Expression String: [%"4cor_206Pb238U"]/[%"4cor_207Pb235U"]

Notes:

Sample spots: Error correlation (for Wetherill concordia plot) between 204Pb-corrected values of 207Pb/235U and 206Pb/238U.

4cor_Discord_Pct

$$100 * \left(1 - \frac{4\text{cor_206Pb238U}}{\left(e^{(\text{Lambda238} * 4\text{cor_207Pb206Pb_Age})} - 1 \right)} \right)$$

4cor_Discord_Pct is not a reference material value

4cor_Discord_Pct is not a parameter value

4cor_Discord_Pct is healthy

4cor_Discord_Pct is not Squid Switch NU

Excel Expression String: $100 * (1 - ["4\text{cor_206Pb238U}] / (\text{EXP}(\text{Lambda238} * ["4\text{cor_207Pb206Pb_Age}"]) - 1))$

Notes:

Sample spots: Discordance of 204Pb-corrected 206Pb/238U and 207Pb/206Pb, defined as $100 * [1 - \{ (206Pb/238U) / \exp([\text{Lambda238} * \{ 207Pb/206Pb age \}] - 1) \}]$, and expressed as a percentage.

4cor_208Pb232Th

$$\text{ValueModel} \left(\text{Total_208Pb232Th} * \text{Rad_208Pb204Pb_Factor}, \sqrt{ } \right)$$

4cor_208Pb232Th is not a reference material value

4cor_208Pb232Th is not a parameter value

4cor_208Pb232Th is healthy

4cor_208Pb232Th is not Squid Switch NU

Excel Expression String: $\text{ValueModel}([\text{Total_208Pb232Th}] * \text{Rad_208Pb204Pb_Factor}, \text{SQRT}([\% \text{Total_208Pb232Th}]^2 + (\text{DefCom_208Pb204Pb} / \text{DefRad_208Pb204Pb})^2 * [\% \text{"204/206"}]^2), \text{false})$

Notes:

Sample spots: 204Pb-corrected 208Pb/232Th.

4cor_208Pb232Th_Age

$$\text{ValueModel} \left(\frac{\ln (1 + 4\text{cor_208Pb232Th})}{\text{Lambda232}}, \frac{\frac{4\text{cor_208Pb232Th}}{\text{Lambda232}} * (4\text{c})}{100} \right)$$

4cor_208Pb232Th_Age is not a reference material value

4cor_208Pb232Th_Age is not a parameter value

4cor_208Pb232Th_Age is healthy

4cor_208Pb232Th_Age is not Squid Switch NU

Excel Expression String: ValueModel((LN(1+["4cor_208Pb232Th"])/Lambda232),
(["4cor_208Pb232Th"])/Lambda232/(1+["4cor_208Pb232Th"])*[% "4cor_208Pb232Th"]/100),true)

Notes:

Sample spots: 204Pb-corrected 208Pb/232Th age.

7cor_206Pb238U

$$\text{ValueModel} \left(e^{(\text{Lambda238} * 7\text{cor_206Pb238U_Age})} - 1, \frac{\text{Lambda238} * e^{(\text{Lambda238} * 7\text{cor_206Pb238U_Age})}}{1} \right)$$

7cor_206Pb238U is not a reference material value

7cor_206Pb238U is not a parameter value

7cor_206Pb238U is healthy

7cor_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(EXP(Lambda238*["7cor_206Pb238U_Age"])-1,Lambda238*EXP(Lambda238*["7cor_206Pb238U_Age"])*[# "7cor_206Pb238U_Age"]/(EXP(Lambda238*["7cor_206Pb238U_Age"])-1)*100,false)

Notes:

Sample spots: 207Pb-corrected 206Pb/238U.

7cor_208Pb232Th_Age

$$\text{Age7CorrPb8Th2WithErr} \left(\text{Total_206Pb238U}, (\text{Total_206Pb238U} * \exp(\text{Lambda238} * 7\text{cor_208Pb232Th_Age})) / (\text{Total_206Pb238U} * \exp(\text{Lambda238} * 7\text{cor_208Pb232Th_Age})) - 1 \right)$$

7cor_208Pb232Th_Age is not a reference material value

7cor_208Pb232Th_Age is not a parameter value

7cor_208Pb232Th_Age is healthy

7cor_208Pb232Th_Age is not Squid Switch NU

Excel Expression String: Age7CorrPb8Th2WithErr(["Total_206Pb238U"],[% "Total_206Pb238U"],
["Total_208Pb232Th"],[% "Total_208Pb232Th"],["208/206"],[% "208/206"],["207/206"],[% "207/206"])

Notes:

Sample spots: 207Pb-corrected 208Pb/232Th age.

7cor_208Pb232Th

$$\text{ValueModel} \left(e^{(\text{Lambda232} * 7\text{cor_208Pb232Th_Age})} - 1, \frac{\text{Lambda232} * e^{(\text{Lambda232} * 7\text{cor_208Pb232Th_Age})}}{e^{(\text{Lambda232} * 7\text{cor_208Pb232Th_Age})} - 1} \right)$$

7cor_208Pb232Th is not a reference material value

7cor_208Pb232Th is not a parameter value

7cor_208Pb232Th is healthy

7cor_208Pb232Th is not Squid Switch NU

Excel Expression String: ValueModel(EXP(Lambda232*["7cor_208Pb232Th_Age"])-1, Lambda232*EXP(Lambda232*["7cor_208Pb232Th_Age"])*[# "7cor_208Pb232Th_Age"]/(EXP(Lambda232*["7cor_208Pb232Th_Age"])-1)*100,false)

Notes:

Sample spots: 207Pb-corrected 208Pb/232Th.

8cor_206Pb238U

$$\text{ValueModel} \left(\text{Pb206U238rad} (8\text{cor_206Pb238U_Age}), \frac{\text{Lambda238} * (\text{Pb206U238rad} (8\text{cor_206Pb238U_Age}) + 1)}{\text{Pb206U238rad} (8\text{cor_206Pb238U_Age})} \right)$$

8cor_206Pb238U is not a reference material value

8cor_206Pb238U is not a parameter value

8cor_206Pb238U is healthy

8cor_206Pb238U is not Squid Switch NU

Excel Expression String: ValueModel(Pb206U238rad(["8cor_206Pb238U_Age"]),Lambda238*(1+Pb206U238rad(["8cor_206Pb238U_Age"]))*[# "8cor_206Pb238U_Age"]*100/Pb206U238rad(["8cor_206Pb238U_Age"])),false)

Notes:

Sample spots: 208Pb-corrected 206Pb/238U.

8cor_238U206Pb

$$\text{ValueModel} \left(\frac{1}{8\text{cor_206Pb238U}}, (8\text{cor_206Pb238U})^{\%}, \text{FALSE} \right)$$

8cor_238U206Pb is not a reference material value

8cor_238U206Pb is not a parameter value

8cor_238U206Pb is healthy

8cor_238U206Pb is not Squid Switch NU

Excel Expression String: VALUEMODEL(1/["8cor_206Pb238U"],[% "8cor_206Pb238U"],false)

Notes:

CM spots: Arithmetic mean of Parent Element concentration constants
(for nominated Parent Element), as measured SOLELY on CM

8cor_207Pb235U

$$\text{Rad8corPb7U5WithErr} \left(\text{Total_206Pb238U}, (\text{Total_206Pb238U})\% \right)$$

8cor_207Pb235U is not a reference material value

8cor_207Pb235U is not a parameter value

8cor_207Pb235U is healthy

8cor_207Pb235U is not Squid Switch NU

Excel Expression String: Rad8corPb7U5WithErr(["Total_206Pb238U"],[% "Total_206Pb238U"], ["8cor_206Pb238U"], ["Total_206Pb238U"]*["207/206"]/Present_238U235U,["232Th238U"],[% "232Th238U"],["207/206"],[% "207/206"],["208/206"],[% "208/206"])

Notes:

Sample spots: 208Pb-corrected 207Pb/235U.

8cor_ErrCorrel

$$\text{Rad8corConcRho} \left(\text{Total_206Pb238U}, (\text{Total_206Pb238U})\%, 8cc \right)$$

8cor_ErrCorrel is not a reference material value

8cor_ErrCorrel is not a parameter value

8cor_ErrCorrel is healthy

8cor_ErrCorrel is not Squid Switch NU

Excel Expression String: Rad8corConcRho(["Total_206Pb238U"],[% "Total_206Pb238U"], ["8cor_206Pb238U"], ["232Th238U"],[% "232Th238U"], ["207/206"],[% "207/206"], ["208/206"],[% "208/206"], [% "206/206"])

Notes:

Sample spots: Error correlation (for Wetherill concordia plot) between 208Pb-corrected values of 207Pb/235U and 206Pb/238U.

8cor_207Pb206Pb

$$\text{ValueModel} \left(\frac{\frac{8\text{cor_207Pb235U}}{8\text{cor_206Pb238U}}}{\text{Present_238U235U}}, \sqrt{\left((8\text{cor_207Pb235U})\% \right)^2 + \left(\frac{8\text{cor_207Pb235U}}{8\text{cor_206Pb238U}} - \frac{8\text{cor_207Pb235U}}{\text{Present_238U235U}} \right)^2} \right)$$

8cor_207Pb206Pb is not a reference material value

8cor_207Pb206Pb is not a parameter value

8cor_207Pb206Pb is healthy

8cor_207Pb206Pb is not Squid Switch NU

Excel Expression String: ValueModel(["8cor_207Pb235U"]/[["8cor_206Pb238U"]]/Present_238U235U, SQRT([%"8cor_207Pb235U"]^2+[%"8cor_206Pb238U"]^2-2*[%"8cor_207Pb235U"]*[%"8cor_206Pb238U"]*[%"8cor_ErrCorrel"]],false)

Notes:

Sample spots: 208Pb-corrected 207Pb/206Pb.

8cor_207Pb206Pb_Age

$$\text{AgePb76WithErr} \left(8\text{cor_207Pb206Pb}, \frac{8\text{cor_207Pb206Pb} * (8\text{cor_207Pb206Pb})}{100} \right)$$

8cor_207Pb206Pb_Age is not a reference material value

8cor_207Pb206Pb_Age is not a parameter value

8cor_207Pb206Pb_Age is healthy

8cor_207Pb206Pb_Age is not Squid Switch NU

Excel Expression String: AgePb76WithErr(["8cor_207Pb206Pb"],(["8cor_207Pb206Pb"]*[%"8cor_207Pb206Pb"]/100))

Notes:

Sample spots: 208Pb-corrected 207Pb/206Pb age.

8cor_Discord_Pct

$$100 * \left(1 - \frac{8\text{cor_206Pb238U}}{\left(e^{(\text{Lambda238} * 8\text{cor_207Pb206Pb_Age})} - 1 \right)} \right)$$

8cor_Discord_Pct is not a reference material value

8cor_Discord_Pct is not a parameter value

8cor_Discord_Pct is healthy

8cor_Discord_Pct is not Squid Switch NU

Excel Expression String: 100*(1-[%"8cor_206Pb238U"]/(EXP(Lambda238*[%"8cor_207Pb206Pb_Age"])-1))

Notes:

Sample spots: Discordance of 208Pb-corrected 206Pb/238U and 207Pb/206Pb, defined as $100 * [1 - \{ (206\text{Pb}/238\text{U}) / \exp([\text{Lambda238} * \{ 207\text{Pb}/206\text{Pb age} \}] - 1) \}]$, and expressed as a percentage

MF_corr.4corr.207*/235%err.

$$(4\text{cor_207Pb235U})^{\%}$$

MF_corr.4corr.207*/235%err. is not a reference material value

MF_corr.4corr.207*/235%err. is not a parameter value

MF_corr.4corr.207*/235%err. is healthy
MF_corr.4corr.207*/235%err. is not Squid Switch NU

Excel Expression String: [% "4cor_207Pb235U"]

Notes:
No notes

MF_corr.4corr.206*/238

4cor_206Pb238U

MF_corr.4corr.206*/238 is not a reference material value
MF_corr.4corr.206*/238 is not a parameter value
MF_corr.4corr.206*/238 is healthy
MF_corr.4corr.206*/238 is not Squid Switch NU

Excel Expression String: ["4cor_206Pb238U"]

Notes:
No notes

MF_corr.4corr.206*/238%err.

$(4\text{cor_}206\text{Pb238U})^{\%}$

MF_corr.4corr.206*/238%err. is not a reference material value
MF_corr.4corr.206*/238%err. is not a parameter value
MF_corr.4corr.206*/238%err. is healthy
MF_corr.4corr.206*/238%err. is not Squid Switch NU

Excel Expression String: [% "4cor_206Pb238U"]

Notes:
No notes

MF_corr.4corr.7*/6*%err.

$(4\text{cor_}207\text{Pb206Pb})^{\%}$

MF_corr.4corr.7*/6*%err. is not a reference material value
MF_corr.4corr.7*/6*%err. is not a parameter value
MF_corr.4corr.7*/6*%err. is healthy
MF_corr.4corr.7*/6*%err. is not Squid Switch NU

Excel Expression String: [% "4cor_207Pb206Pb"]

Notes:
No notes

Total_238U206Pb

$$\text{ValueModel} \left(\frac{1}{\text{Total_206Pb238U}} , (\text{Total_206Pb238U})\% , \text{FALSE} \right)$$

Total_238U206Pb is not a reference material value

Total_238U206Pb is not a parameter value

Total_238U206Pb is healthy

Total_238U206Pb is not Squid Switch NU

Excel Expression String: ValueModel(1/["Total_206Pb238U"],[% "Total_206Pb238U"],false)

Notes:

Sample spots: Calculated total 238U/206Pb. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

4cor_206Pb238U_Age

$$\text{ValueModel} \left(\frac{\ln (1 + 4\text{cor_206Pb238U})}{\text{Lambda238}} , \sqrt{\frac{\frac{1}{\text{Lambda238}}}{e^{\left(\text{Lambda238} * \frac{\ln(1+4\text{cor_206Pb238U})}{\text{Lambda238}}\right)^2}}} \right)$$

4cor_206Pb238U_Age is not a reference material value

4cor_206Pb238U_Age is not a parameter value

4cor_206Pb238U_Age is healthy

4cor_206Pb238U_Age is not Squid Switch NU

Excel Expression String: ValueModel((LN(1+["4cor_206Pb238U"])/Lambda238),SQRT(((1/Lambda238)/EXP(Lambda238*(LN(1+["4cor_206Pb238U"])/Lambda238)))^2)*(["Total_206Pb238U"]*["204/206"])^2)*((DefRad_206Pb204Pb*[%"Total_206Pb238U"]/100)^2+([%"204/206"]*DefCom_206Pb204Pb/100)^2)),true)

Notes:

Sample spots: 204Pb-corrected 206Pb/238U age.

MF-corr.206*/238 Age

4cor_206Pb238U_Age

MF-corr.206*/238 Age is not a reference material value

MF-corr.206*/238 Age is not a parameter value

MF-corr.206*/238 Age is healthy

MF-corr.206*/238 Age is not Squid Switch NU

Excel Expression String: ["4cor_206Pb238U_Age"]

Notes:

No notes

MF-corr.206*/238 Ageabs.err.

$$(4\text{cor_206Pb238U_Age})^{\pm}$$

MF-corr.206*/238 Ageabs,err. is not a reference material value

MF-corr.206*/238 Ageabs,err. is not a parameter value

MF-corr.206*/238 Ageabs,err. is healthy

MF-corr.206*/238 Ageabs,err. is not Squid Switch NU

Excel Expression String: [#"4cor_206Pb238U_Age"]

Notes:

No notes

MF_corr.4corr.7*/6*

$$4\text{cor_207Pb206Pb} * \text{MassFract.Factor}$$

MF_corr.4corr.7*/6* is not a reference material value

MF_corr.4corr.7*/6* is not a parameter value

MF_corr.4corr.7*/6* is healthy

MF_corr.4corr.7*/6* is not Squid Switch NU

Excel Expression String: ["4cor_207Pb206Pb"]*["MassFract.Factor"]

Notes:

No notes

MF_corr.4corr.7*/6* Age

$$\text{AgePb76}(\text{MF_corr.4corr.7*/6*})$$

MF_corr.4corr.7*/6* Age is not a reference material value

MF_corr.4corr.7*/6* Age is not a parameter value

MF_corr.4corr.7*/6* Age is healthy

MF_corr.4corr.7*/6* Age is not Squid Switch NU

Excel Expression String: AgePb76(["MF_corr.4corr.7*/6*"])

Notes:

No notes

MF_corr.%Disc.

$$1 - \frac{\text{MF_corr.4corr.206*/238}}{(e^{(0.000155125*\text{MF_corr.4corr.7*/6*}\text{Age})} - 1)}$$

MF_corr.%Disc. is not a reference material value

MF_corr.%Disc. is not a parameter value

MF_corr.%Disc. is healthy

MF_corr.%Disc. is not Squid Switch NU

Excel Expression String: (1-["MF_corr.4corr.206"/238]/(EXP(0.000155125*["MF_corr.4corr.7"/6*Age])-1))

Notes:

No notes

62667*/6*biwt

sqBiweight (4cor_207Pb206Pb, 9)

62667*/6*biwt is not a reference material value

62667*/6*biwt is not a parameter value

62667*/6*biwt is healthy

62667*/6*biwt is not Squid Switch NU

Excel Expression String: sqBiweight(["4cor_207Pb206Pb"],9)

Notes:

No notes

4cor_Com206Pb_Pct

$$100 * \text{DefCom}_\text{206Pb} / \text{204Pb} * \frac{\text{204}_{\text{Pb}}}{\text{206}_{\text{Pb}}}$$

4cor_Com206Pb_Pct is not a reference material value

4cor_Com206Pb_Pct is not a parameter value

4cor_Com206Pb_Pct is healthy

4cor_Com206Pb_Pct is not Squid Switch NU

Excel Expression String: 100*DefCom_206Pb204Pb*["204/206"]

Notes:

RM and Sample spots: Common 206Pb as a percentage of total 206Pb, based on the 204Pb-correction.

6266%com206

sqBiweight (4cor_Com206Pb_Pct, 9)

6266%com206 is not a reference material value

6266%com206 is not a parameter value

6266%com206 is healthy

6266%com206 is not Squid Switch NU

Excel Expression String: sqBiweight(["4cor_Com206Pb_Pct"],9)

Notes:

No notes

Yb ppm

$$\frac{190_{\text{YbO}}}{195.8_{\text{Zr}}} * \text{Ybsen}$$

Yb ppm is not a reference material value

Yb ppm is not a parameter value

Yb ppm is healthy

Yb ppm is not Squid Switch NU

Excel Expression String: ["190/195.8"]*Ybsen

Notes:

No notes

Yb1abserr

$$\sqrt{\left(\frac{\text{Ybsens1sigabserror}}{\text{Ybsen}}\right)^2 + \left(\frac{\left(\frac{190_{\text{YbO}}}{195.8_{\text{Zr}}}\right)\%}{100}\right)^2} * \text{Yb ppm}$$

Yb1abserr is not a reference material value

Yb1abserr is not a parameter value

Yb1abserr is healthy

Yb1abserr is not Squid Switch NU

Excel Expression String: sqrt((Ybsens1sigabserror/Ybsen)^2+[% "190/195.8"]/100)^2)*["Yb ppm"]

Notes:

No notes

7cor_Total_208Pb232Th

$$\text{ValueModel} \left(\frac{\text{Total_206Pb238U} * \frac{208_{\text{Pb}}}{206_{\text{Pb}}}}{\text{232Th238U}}, \sqrt{\left(\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}}\right)\%\right)^2 + ((T$$

7cor_Total_208Pb232Th is not a reference material value

7cor_Total_208Pb232Th is not a parameter value

7cor_Total_208Pb232Th is healthy

7cor_Total_208Pb232Th is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U"]*["208/206"]/[["232Th238U"]],SQRT([%"208/206"]^2+[% "Total_206Pb238U"]^2+[% "232Th238U"]^2),false)

Notes:

Sample spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

8cor_Total_208Pb232Th

$$\text{ValueModel} \left(\frac{\text{Total_206Pb238U} * \frac{208_{\text{Pb}}}{206_{\text{Pb}}}}{\text{232Th238U}} , \sqrt{\left(\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}} \right)^{\%} \right)^2 + ((\text{T}))^2} \right)$$

8cor_Total_208Pb232Th is not a reference material value

8cor_Total_208Pb232Th is not a parameter value

8cor_Total_208Pb232Th is healthy

8cor_Total_208Pb232Th is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U"]*["208/206"]/[("232Th238U"],SQRT([%"208/206"]^2+[%"Total_206Pb238U"]^2+[%"232Th238U"]^2),false)

Notes:

Sample spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

7cor_Total_208Pb232Th_RM

$$\text{ValueModel} \left(\frac{\text{Total_206Pb238U_RM} * \frac{208_{\text{Pb}}}{206_{\text{Pb}}}}{\text{232Th238U_RM}} , \sqrt{\left(\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}} \right)^{\%} \right)^2 + ((\text{T}))^2} \right)$$

7cor_Total_208Pb232Th_RM is not a reference material value

7cor_Total_208Pb232Th_RM is not a parameter value

7cor_Total_208Pb232Th_RM is healthy

7cor_Total_208Pb232Th_RM is not Squid Switch NU

Excel Expression String: ValueModel(["Total_206Pb238U_RM"]*["208/206"]/[("232Th238U_RM"],SQRT([%"208/206"]^2+[%"Total_206Pb238U_RM"]^2+[%"232Th238U_RM"]^2),false)

Notes:

RM spots: Calculated total 208Pb/232Th. Always depends on the index isotope (204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

4cor_Com208Pb_Pct

$$\frac{100 * \text{DefCom_208Pb204Pb}}{\frac{208_{\text{Pb}}}{206_{\text{Pb}}}} * \frac{204_{\text{Pb}}}{206_{\text{Pb}}}$$

4cor_Com208Pb_Pct is not a reference material value
4cor_Com208Pb_Pct is not a parameter value
4cor_Com208Pb_Pct is healthy
4cor_Com208Pb_Pct is not Squid Switch NU

Excel Expression String: $100 * \text{DefCom_208Pb204Pb} / ["208/206"] * ["204/206"]$

Notes:

RM and Sample spots: Common 208Pb as a percentage of total 208Pb, based on the 204Pb-correction.

Expo

RobReg (LnUOU, LnPbU)

Expo is not a reference material value
Expo is not a parameter value
Expo is healthy
Expo is not Squid Switch NU

Excel Expression String: $\text{RobReg}(["\text{LnUOU}"], ["\text{LnPbU}"])$

Notes:

No notes

7cor_Com208Pb_Pct_RM

$$\frac{100 * \text{DefCom_208Pb204Pb}}{\frac{208_{\text{Pb}}}{206_{\text{Pb}}}} * 204\text{Pb}206\text{Pb_From207Pb}$$

7cor_Com208Pb_Pct_RM is not a reference material value
7cor_Com208Pb_Pct_RM is not a parameter value
7cor_Com208Pb_Pct_RM is healthy
7cor_Com208Pb_Pct_RM is not Squid Switch NU

Excel Expression String: $100 * \text{DefCom_208Pb204Pb} / ["208/206"] * ["204\text{Pb}206\text{Pb_From207Pb}]$

Notes:

RM spots: Common 208Pb as a percentage of total 208Pb, based on the 207Pb-correction.

7cor_Com208Pb_Pct

$$\frac{100 * \text{DefCom_208Pb204Pb}}{\frac{208_{\text{Pb}}}{206_{\text{Pb}}}} * 7\text{cor_204Pb206Pb}$$

7cor_Com208Pb_Pct is not a reference material value
7cor_Com208Pb_Pct is not a parameter value
7cor_Com208Pb_Pct is healthy
7cor_Com208Pb_Pct is not Squid Switch NU

Excel Expression String: 100*DefCom_208Pb204Pb/["208/206"]*["7cor_204Pb206Pb"]

Notes:

Sample spots: Common 208Pb as a percentage of total 208Pb, based on the 207Pb-correction.

7cor_208Pb206Pb_RM

$$\text{ValueModel} \left(\frac{\left(\frac{\frac{208\text{Pb}}{206\text{Pb}}}{204\text{Pb}206\text{Pb_From207Pb}} - \text{DefCom_208Pb204Pb} \right)}{\left(\frac{1}{204\text{Pb}206\text{Pb_From207Pb}} - \text{DefCom_206Pb204Pb} \right)}, \text{St} \right)$$

7cor_208Pb206Pb_RM is not a reference material value

7cor_208Pb206Pb_RM is not a parameter value

7cor_208Pb206Pb_RM is healthy

7cor_208Pb206Pb_RM is not Squid Switch NU

Excel Expression String: ValueModel(([{"208/206"]}/["204Pb206Pb_From207Pb"]-DefCom_208Pb204Pb)/(1/[{"204Pb206Pb_From207Pb"}]-DefCom_206Pb204Pb),StdPb86radCor7per(["208/206"], ["207/206"], [{"208/206"}]/[{"204Pb206Pb_From207Pb"}]-DefCom_208Pb204Pb)/(1/[{"204Pb206Pb_From207Pb"}]-DefCom_206Pb204Pb),["204Pb206Pb_From207Pb"]),false)

Notes:

RM spots: Radiogenic 208Pb/206Pb, based on the 207Pb-correction.

Hfppm

$$\text{Hfsens} * \frac{195.9_{\text{HfO}}}{195.8_{\text{Zr}}}$$

Hfppm is not a reference material value

Hfppm is not a parameter value

Hfppm is healthy

Hfppm is not Squid Switch NU

Excel Expression String: Hfsens*["195.9/195.8"]

Notes:

No notes

Hf1sabserr

$$\sqrt{\left(\frac{Hfsens1sigabs}{Hfsens}\right)^2 + \left(\frac{\left(\frac{195.9_{\text{HfO}}}{195.8_{\text{Zr}}}\right)\%}{100}\right)^2} * \text{Hfppm}$$

Hf1sabserr is not a reference material value

Hf1sabserr is not a parameter value

Hf1sabserr is healthy

Hf1sabserr is not Squid Switch NU

Excel Expression String: `sqrt((Hfsens1sigabs/Hfsens)^2+[% "195.9/195.8"]/100)^2)*["Hfppm"]`

Notes:

No notes

8cor_Total_208Pb232Th_RM

$$\text{ValueModel} \left(\frac{\text{Total_206Pb238U_RM} * \frac{208_{\text{Pb}}}{206_{\text{Pb}}}}{\text{232Th238U_RM}} , \sqrt{\left(\left(\frac{208_{\text{Pb}}}{206_{\text{Pb}}}\right)\%\right)^2} \right)$$

8cor_Total_208Pb232Th_RM is not a reference material value

8cor_Total_208Pb232Th_RM is not a parameter value

8cor_Total_208Pb232Th_RM is healthy

8cor_Total_208Pb232Th_RM is not Squid Switch NU

Excel Expression String: `ValueModel(["Total_206Pb238U_RM"]*["208/206"]/[["232Th238U_RM"]], SQRT([%"208/206"]^2+[%"Total_206Pb238U_RM"]^2+[%"232Th238U_RM"]^2),false)`

Notes:

RM spots: Calculated total 208Pb/232Th. Always depends on the index isotope

(204Pb, 207Pb, or in the case of "Perm1", possibly 208Pb) chosen for the common Pb correction.

MF_corr.4corr.207*/235

$$4\text{cor_206Pb238U} * \text{NatUrat} * \text{MF_corr.4corr.7} * /6*$$

MF_corr.4corr.207*/235 is not a reference material value

MF_corr.4corr.207*/235 is not a parameter value

MF_corr.4corr.207*/235 is healthy

MF_corr.4corr.207*/235 is not Squid Switch NU

Excel Expression String: `["4cor_206Pb238U"]*NatUrat*["MF_corr.4corr.7*/6*"]`

Notes:

No notes

ERRORCoefficient

Missing Expression

ERRORCoefficient is not a reference material value

ERRORCoefficient is not a parameter value

ERRORCoefficient is not healthy

ERRORCoefficient is not Squid Switch NU

Excel Expression String: ["ErrCorr"]

Notes:

No notes