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U13-5 recalculation

675412

A)

U13-5 GRAIN 1 - CORE

Silence
Lake
(82m/13)

$$Si = 5.885$$

$$Ti = .221$$

$$Al = 3.279 \quad Cr = 0.$$

$$Fe = .488 \quad (\text{assume all is } Fe^{3+})$$

$$Mn = 0$$

$$Mg = .401$$

$$Ca = 5.98$$

$$a) Z = \underline{6.0} = 5.885 + 0.115 (Al)$$

$$3.279$$

$$0.115$$

$$\underline{3.164}$$

$$.488$$

$$.221$$

$$\underline{3.873}$$

$$\therefore b) Y \approx 4.0 = (3.279 - 0.115) + \frac{Cr}{0} + \frac{Fe^{3+}}{.488} + \frac{Ti}{.221}$$

$$= 3.164 + 0 + .488 + .221$$

$$Y = \underline{3.873}$$

$$\therefore c) X \approx 6.0 = \frac{Mg}{.401} + \frac{Fe^{2+}}{0} + \frac{Mn}{0} + \frac{Ca}{5.98}$$

$$5.98$$

$$.401$$

$$\underline{6.381}$$

$$\therefore X = \underline{6.381}$$

$$\therefore P_g = \frac{Mg}{\Sigma X} = \frac{.401}{6.381} \times 100 = \underline{6.28}$$

$$S_p = \frac{Mn}{\Sigma X} = \frac{0}{6.381} = 0$$

$$A_{lm} = \frac{Fe^{2+}}{\Sigma X} = \frac{0}{6.381} = 0$$

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$$\Sigma (Uv + Gr + And) = \del{5.98}$$

$$= \frac{Cu}{\Sigma X} = \left[\frac{5.98}{6.381} \times 100 \right] = C.$$

$$\therefore C = 93.72.$$

$$\therefore a) Uv = \frac{Cr}{\Sigma y} \times C = \frac{0}{3.873} \times 93.72 = 0.$$

$$b) And = \del{.488} + \left(\frac{Fe^{3+} + Ti}{\Sigma y} \right) \times C$$

$$= \left(\frac{.488 + .221}{3.873} \right) \times 93.72$$

$$= 17.16\%.$$

$$c) Gr = \frac{Al}{\Sigma y} = \frac{3.164}{3.873} \times 93.72$$

$$= 76.56\%.$$

(^{Nb:} Al value in "y" posn.)

\therefore	Gr = 76.56	pos'n.	5
	And = 17.16		4
	Uv = 0		—
	Alm = 0		1
	Sp = 0		2
	Py = 6.28		3

3B) UB-5. GRAIN 1 - RIM.

$$\text{Si} = 5.906$$

$$\text{Ti} = .248$$

$$\text{Al} = 3.19$$

$$\text{Cr} = 0$$

$$\text{Fe} = .478 \text{ (assume all as Fe}^{3+}\text{)}$$

$$\text{Mn} = 0$$

$$\text{Mg} = .426$$

$$\text{Ca} = 6.001$$

$$\text{a) } Z = \underline{6.0} = \overset{\text{Si}}{5.906} + \overset{\text{Al}}{.094}$$

$$\begin{aligned} \text{b) } Y \approx 4.0 &= \text{Al} + \text{Cr} + \text{Fe}^{3+} + \text{Ti} \\ &= (3.19 - 0.094) + 0 + .478 + .248 \\ &= \underline{3.82} \end{aligned}$$

$$\begin{aligned} \text{c) } X \approx 6.0 &= \text{Mg} + \text{Fe}^{2+} + \text{Mn} + \text{Ca} \\ &= .426 + 0 + 0 + 6.001 \\ &= \underline{6.427} \end{aligned}$$

$$\therefore P_y = \frac{\text{Mg}}{\sum X} = \frac{.426}{6.427} \times 100 = \underline{6.63} \text{ (6.628287)}$$

$$S_p = \frac{\text{Mn}}{\sum X} = \frac{0}{6.427} \times 100 = \underline{0}$$

$$A/m = \frac{\text{Fe}^{2+}}{\sum X} = \frac{0}{6.427} \times 100 = \underline{0}$$

4

$$\Sigma (U_r + G_r + A_{nd})$$

$$= \frac{C_a}{\Sigma X} = \left[\frac{6.001}{6.427} \times 100 \right] = C$$

$$= 93.37 = C$$

$$\therefore a) U_r = \frac{C_r}{\Sigma y} \times C = \frac{0}{3.82} \times 93.37 = 0$$

$$\therefore b) A_{nd} = \left(\frac{Fe^{3+} + Ti}{\Sigma y} \right) = \left(\frac{0.478 + 0.248}{3.82} \right) \times 93.37$$
$$= \underline{17.75} \quad (17.745169)$$

$$c) G_r = \frac{Al(\text{in } y \text{ posn})}{\Sigma y} \times C$$
$$= \frac{3.096}{3.82} \times 93.37$$
$$= 75.67 \quad (75.673697)$$

\therefore	P_y	$= 6.63$	posn	3
	SP	$= 0$		2
	Alm	$= 0$		1
	U_r	$= 0$		-
	A_{nd}	$= 17.75$		4
	G_r	$= 75.67$		5
		<hr/>		
		100.051		

5C:UB-5. GRAIN 2 - CORE

$$Si = 5.916$$

$$Ti = .211$$

$$Al = 3.23$$

$$Cr = 0$$

$$Fe = .487 \text{ (assume all } Fe^{3+})$$

$$Mn = .001$$

$$Mg = .460$$

$$Ca = 5.924$$

$$a) Z = \underline{6.0} = 5.916 + .084 (Al)$$

$$\begin{aligned}
 b) Y \approx 4.0 &= Al + Cr + Fe^{3+} + Ti \\
 &= (3.23 - .084) + 0 + .487 + .211 \\
 &= 3.146 + 0 + .487 + .211 \\
 &= \underline{3.844}
 \end{aligned}$$

$$\begin{aligned}
 c) X \approx 6.0 &= Mg + Fe^{2+} + Mn + Ca \\
 &= .460 + 0 + .001 + 5.924 \\
 &= \underline{6.385}
 \end{aligned}$$

$$s.o. P_y = \frac{Mg}{\sum X} \times 100 = \frac{.460}{6.385} \times 100 = \underline{7.20}$$

$$S_p = \frac{Mn}{\sum X} \times 100 = \frac{.001}{6.385} \times 100 = 0.02$$

$$Alm = \frac{Fe^{2+}}{\sum X} \times 100 = \frac{0}{6.385} \times 100 = 0.$$

6.

$$\Sigma (Uv + Gr + And)$$

$$= \frac{Ca}{\Sigma X} = \left[\frac{\cancel{5.924}}{6.385} \times 100 \right] = C$$

$$= 92.78.$$

$$\therefore a) Uv = \frac{Cr}{\Sigma y} \times C = \frac{0}{3.844} \times 92.78 = 0$$

$$b) And = \frac{(Fe^{3+} + Ti)}{\Sigma y} \times C =$$

$$= \frac{.487 + .211}{3.844} \times 92.78$$

$$= 16.85.$$

$$c) Gr = \frac{Al \text{ (in "y" posn)}}{\Sigma y} \times C$$

$$= \frac{3.146}{3.844} \times 92.78 = 75.93$$

\therefore	Gr = 75.93	<u>5</u>
	And = 16.85	4
	Uv = 0	—
	Alm = 0	1
	Sp = 0.02	2
	Py = 7.28	3
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	100.00	

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UB-5. GRAIN 2 - RIM

$$Si = 5.917$$

$$Ti = 0.193$$

$$Al = 3.245$$

$$Cr = 0$$

$$Fe = 0.447 \text{ (assume all is } Fe^{3+})$$

$$Mn = 0$$

$$Mg = 0.475$$

$$Ca = 5.991$$

$$a) \quad Z = \underline{6.0} = 5.917 + 0.083(Al)$$

$$\begin{aligned} b) \quad Y \approx 4.0 &= Al + Cr + Fe^{3+} + Ti \\ &= (3.245 - 0.083) + 0 + 0.447 + 0.193 \\ &= 3.162 + 0 + 0.447 + 0.193 \\ &= \underline{3.802} \end{aligned}$$

$$\begin{aligned} c) \quad X \approx 6.0 &= Mg + Fe^{2+} + Mn + Ca \\ &= 0.475 + 0 + 0 + 5.991 \\ &= \underline{6.466} \end{aligned}$$

$$P_y = \frac{Mg}{\sum X} \times 100 = \frac{0.475}{6.466} \times 100 = 7.35$$

$$S_p = \frac{Mn}{\sum X} \times 100 = \frac{0}{6.466} \times 100 = 0$$

$$Al_m = \frac{Fe^{2+}}{\sum X} \times 100 = \frac{0}{6.466} \times 100 = 0$$

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$$(Uv + Gr + And)$$

$$= \frac{Ca}{\Sigma X} = \left[\frac{5.991}{6.466} \times 100 \right] = C$$

$$= 92.65 = C$$

$$\therefore Uv = \frac{Cr}{\Sigma y} \times C = \frac{0}{3.802} \times 92.65 = 0$$

$$b) And = \frac{(Fe^{3+} + Ti)}{\Sigma y} \times C =$$

$$= \frac{(0.447 + 0.193)}{3.802} \times 92.65$$

$$= 15.60$$

$$c) Gr = \frac{Al(\text{in } y \text{ posn})}{\Sigma y} \times C$$

$$= \frac{3.162}{3.802} \times 92.65$$

$$= 77.05$$

∴	Gr	=	77.05	posn.	5
	And	=	15.60		4
	Uv	=	0		1
	Alm	=	0		1
	Sp	=	0		2
	Pg	=	7.35		3
			100		

9EUTB-5. GRAIN 3 - CORE

Si = 5.923

Ti = .203

Al = 3.239

Cr = 0

Fe = .477 (assume all is Fe³⁺)

Mn = 0

Mg = .426

Ca = 5.988

a) $Z = \underline{6.0} = 5.923 + .077 \text{ (Al)}$

$$\begin{aligned}
 \text{b) } Y &\approx 4.0 = \text{Al} + \text{Cr} + \text{Fe}^{3+} + \text{Ti} \\
 &= (5.923 - .077) + 0 + .477 + .203 \\
 &= 5.846 + 0 + .477 + .203 \\
 &= 6. \\
 &= (3.239 - .077) + 0 + .477 + .203 \\
 &= 3.162 + 0 + .477 + .203 \\
 &= \underline{3.842}
 \end{aligned}$$

$$\begin{aligned}
 \text{c) } X &\approx 6.0 = \text{Mg} + \text{Fe}^{2+} + \text{Mn} + \text{Ca} \\
 &= .426 + 0 + 0 + 5.988 \\
 &= \underline{6.414}
 \end{aligned}$$

$$\text{so } P_y = \frac{\text{Mg}}{\sum X} \times 100 = \frac{.426}{6.414} \times 100 = 6.64$$

$$\text{Sp} = \frac{\text{Mn}}{\sum X} \times 100 = \frac{0}{6.414} \times 100 = 0$$

$$\text{Alm} = \frac{\text{Fe}^{2+}}{\sum X} \times 100 = \frac{0}{6.414} \times 100 = 0$$

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$$(UV + Gr + And)$$

$$= \frac{Ca}{\Sigma X} = \left[\frac{5.988}{6.414} \times 100 \right] = C$$

$$= 93.36.$$

$$\therefore 1) UV = \frac{Cr}{\Sigma y} \times C = \frac{0}{3.842} \times 93.36 = 0.$$

$$2) And = \frac{(Fe^{3+} + Ti)}{\Sigma y} \times C$$

$$= \frac{.477 + .203}{3.842} \times 93.36$$

$$= 16.52$$

$$3) Gr = \frac{Al \text{ (in "y" posisi)}}{\Sigma y} \times C$$

$$= \frac{3.162}{3.842} \times 93.36$$

$$= 76.84.$$

\therefore	Gr	=	76.84	$\frac{100}{5}$
	And	=	16.52	4
	UV	=	0	-
	Alm	=	0	1
	Sp	=	0	2
	Ry	=	6.64	3
			<hr/>	
			100	

WF4B-5. GRAIN 3-RIM

$$Si = 5.937$$

$$Ti = 0$$

$$Al = 3.683$$

$$Cr = 0$$

$$Fe = .490 \text{ (assume all is } Fe^{3+})$$

$$Mn = 0$$

$$Mg = .206$$

$$Ca = 5.905$$

$$a) Z = 6.0 = 5.937 + .063(Al)$$

$$\begin{aligned}
 b) Y &\approx 4.0 = Al + Cr + Fe^{3+} + Ti \\
 &= (3.683 - .063) + 0 + .490 + 0 \\
 &= 3.62 + 0 + .490 + 0 \\
 &= \underline{4.110}
 \end{aligned}$$

$$\begin{aligned}
 c) X &\approx 6.0 = Mg + Fe^{2+} + Mn + Ca \\
 &= .206 + 0 + 0 + 5.905 \\
 &= \underline{6.111}
 \end{aligned}$$

$$\therefore P_y = \frac{Mg}{\sum X} \times 100 = \frac{.206}{6.111} \times 100 = 3.37$$

$$Sp = \frac{Mn}{\sum X} \times 100 = \frac{0}{6.111} \times 100 = 0$$

$$Alm = \frac{Fe^{2+}}{\sum X} \times 100 = \frac{0}{6.111} \times 100 = 0$$

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$$(Uv + Gr + And)$$

$$= \frac{Ca}{\Sigma x} = \left[\frac{5.905}{6.111} \times 100 \right] = C$$

$$= 96.63.$$

$$\therefore 1) Uv = \frac{Cr}{\Sigma y} \times C = \frac{0}{4.110} \times 96.63 = 0$$

$$2) And = \frac{(Fe^{3+} + Ti)}{\Sigma y} \times \frac{96.63}{C} = \frac{(0.490 + 0)}{4.110} \times 96.63$$

$$= \cancel{11.92} 11.52$$

$$3) Gr = \frac{Al (\text{in } y \text{ posn})}{\Sigma y} \times C$$

$$= \frac{3.62}{4.110} \times 96.63$$

$$= \cancel{88.00} = 85.11$$

∴	Gr = 85.11	$\frac{\text{posn}}{5}$
	And = 11.52	4
	Uv = 0	—
	Alm = 0	1
	Sjo = 0	2
	Py = 3.37 3.37	3
	100	

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G

UB-5 AVERAGE

$$Si = 5.914$$

$$Ti = .179$$

$$Al = 3.312$$

$$Cr = 0$$

$$Fe = .478 \text{ (assume all is } Fe^{3+})$$

$$Mn = 0$$

$$Mg = .398$$

$$Ca = 5.97$$

$$a) Z = 6.0 = 5.914 + .086 (Al)$$

$$\begin{aligned} b) Y &\approx 4.0 = Al + Cr + Fe^{3+} + Ti \\ &= (3.312 - .086) + 0 + .478 + .179 \\ &= 3.226 + 0 + .478 + .179 \\ &= \underline{3.883} \end{aligned}$$

$$\begin{aligned} c) X &\approx 6.0 = Mg + Fe^{2+} + Mn + Ca \\ &= .398 + 0 + 0 + 5.97 \\ &= \underline{6.368} \end{aligned}$$

$$p_y = \frac{Mg}{\sum X} \times 100 = \frac{.398}{6.368} \times 100 = 6.25$$

$$s_p = \frac{Mn}{\sum X} \times 100 = \frac{0}{6.368} \times 100 = 0$$

$$Al_{m} = \frac{Fe^{2+}}{\sum X} \times 100 = \frac{0}{6.368} \times 100 = 0$$

14.

$$(Uv + Gr + And)$$

$$= \frac{Ca}{\Sigma X} = \left[\frac{5.970}{6.368} \times 100 \right] = C$$

$$= 93.75 = C$$

$$\therefore 1) Uv = \frac{Cr}{\Sigma y} \times C = \frac{0}{3.883} \times 93.75 = 0$$

$$2) And = \frac{(Fe^{3+} + Ti)}{\Sigma y} \times C = \frac{(0.478 + 0.179)}{3.883} \times 93.75$$
$$= 15.86$$

$$3) Gr = \frac{Al \text{ (in "y" pos'n)}}{\Sigma y} \times C$$
$$= \frac{3.226}{3.883} \times 93.75$$
$$= 77.89$$

	<u>pos'n</u>
$\therefore Gr = 77.89$	5
$And = 15.86$	4
$Uv = 0$	—
$Alm = 0$	1
$Sp = 0$	2
$Py = 6.25$	3
100	