TABLE 3.3 HCA Nucleation Times Versus Compositions

Name	HCA Nucleation Times
A1	3–4 days
B1	3–4 days
C1	<1 day
A2	3–4 days
B2	3–4 days
C2	22 h
A3	3–4 days
B3	3–4 days
C3	3–4 days
A4	3–4 days
B4	3–4 days
C4	3–4 days
A5	2–2.5 days
B5	2–2.5 days
C5	2–2.5 days

crystallize their layer of amorphous CaP in HCA but as the first stages of reactivity are faster, the layer of HCA and thus the bioactivity appear earlier. For all other compounds, bioactivity appears after 3 days of soaking.

The invert glasses, but only those with a high sodium ratio, are thus the most interesting. C2 glass is clearly the most interesting one.

3.1.2.3.2 Bioactivity in Terms of Thickness

This study was carried out over 10 days or more of soaking in order to compare sufficiently thick HCA layers.

Qualitative analyses were carried out by SEM-EDS to distinguish and measure the different layers. Bioglass 45S5 remains the reference.

Fig. 3.3 shows the EDS analysis of a cross-section of Bioglass 45S5 and C2 glass.

From left to right, four domains can be distinguished in the photograph:

- the first layer on the left corresponds to the glass (points 1, 2, and 3),
- the second just above must correspond to the layer of silica gel (points 4, 5, and 6),