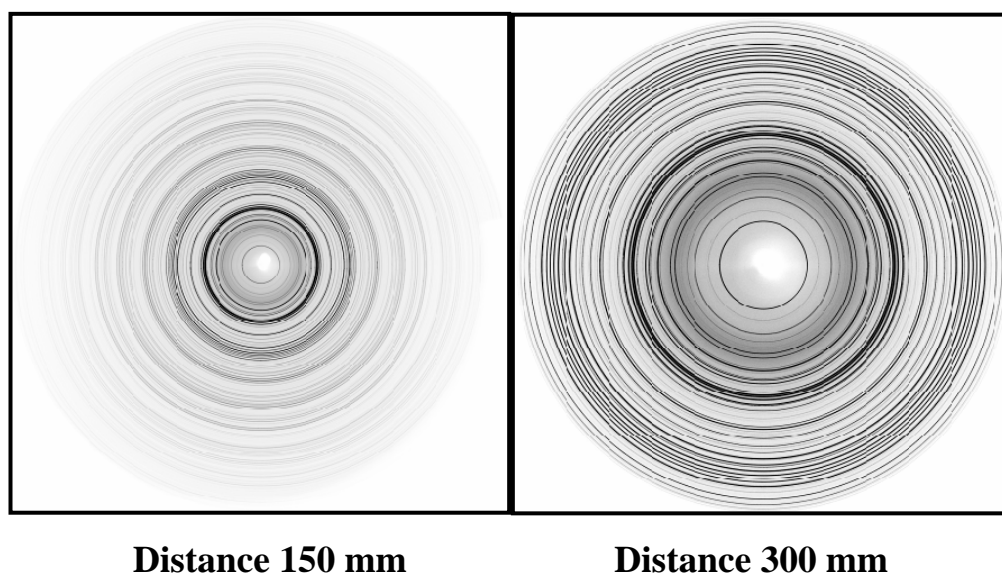# Electronic Supplementary Information for the article

"Structural characterization of Sol-Gel derived Sr-substituted calcium phosphates with anti-osteoporotic and anti-inflammatory properties.

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Distance 150 mm   **Distance 300 mm**

**Figure S1** : 2D diffraction patterns recorded for th eHAp sample with two sample to detector distances.

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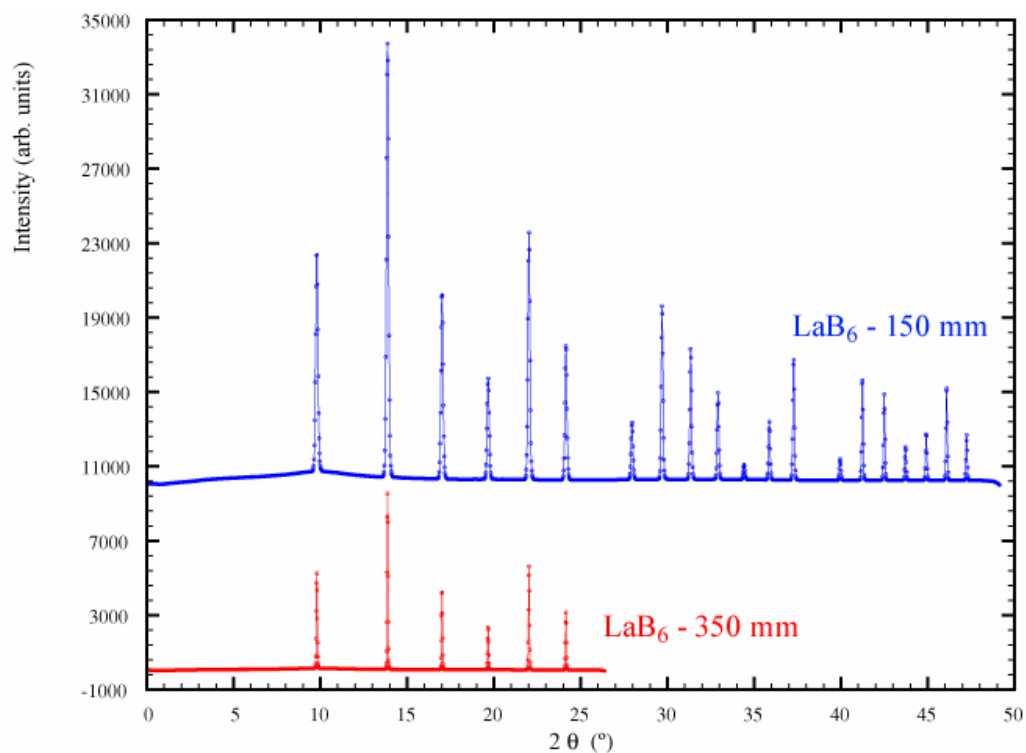
Figure S2 : Powder patterns from the Joint Rietveld on the reference LaB_6 compound. Two sample-to-detector distances represent top blue (150 mm) and bottom red (350 mm) plots. The data were measured at SNBL, ESRF with MAR345 Image Plate detector and $\lambda = 0.710130$ Å.
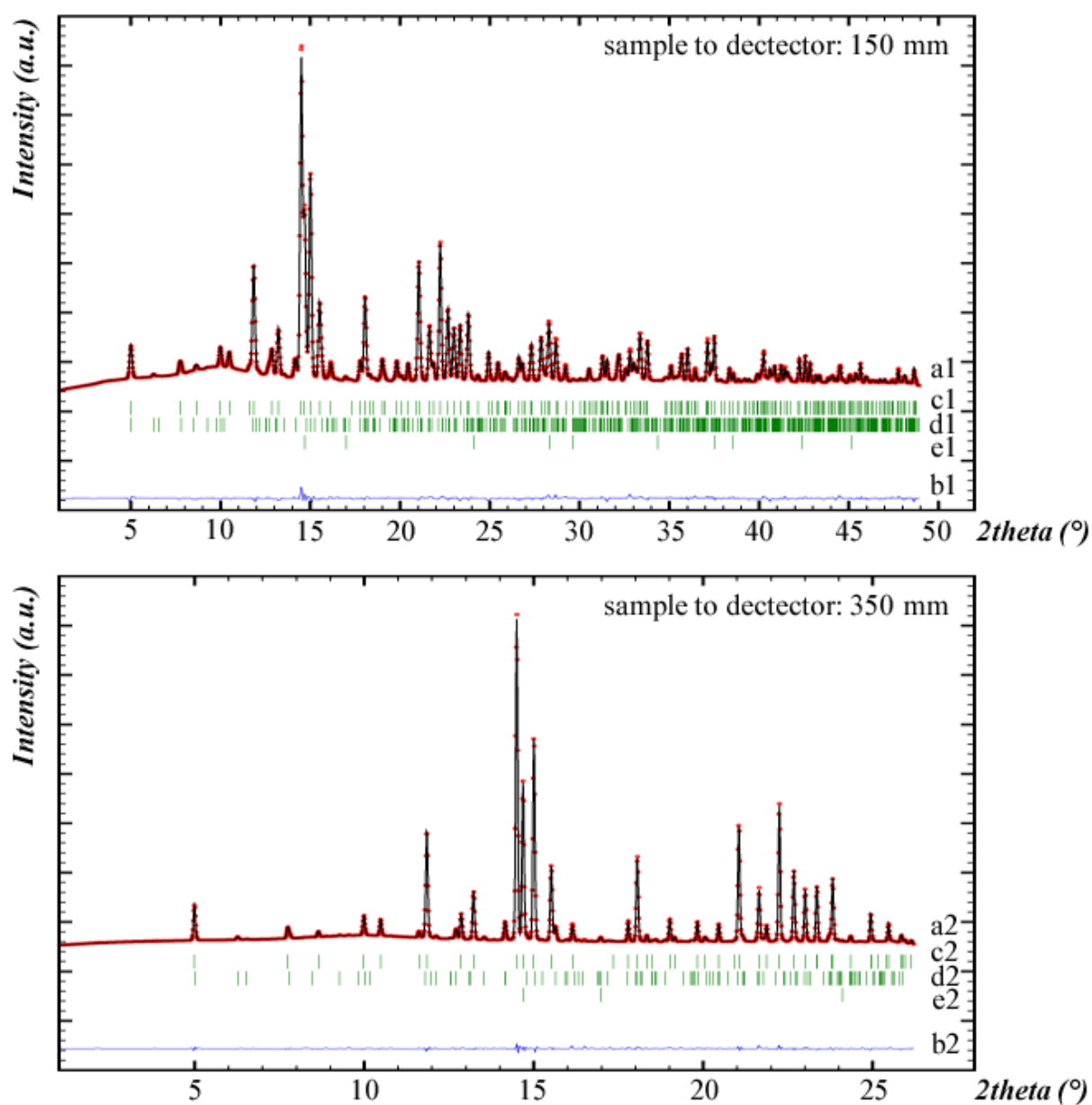
Figure S3: Powder patterns from the Joint Rietveld on the HAp sample. Two sample-to-detector distances represent top (150 mm) and bottom (350 mm) plots. The data were measured at SNBL, ESRF with MAR345 Image Plate detector and $\lambda = 0.710130$ Å. Observed (a1 and a2; red dots), calculated (a1 and a2; black lines) and difference (b1 and b2; blue lines) powder diffraction patterns are presented. Bragg positions are indicated by green vertical bars for hydroxyapatite (c1 and c2), whitlockite (d1 and d2) and lime (e1 and e2).
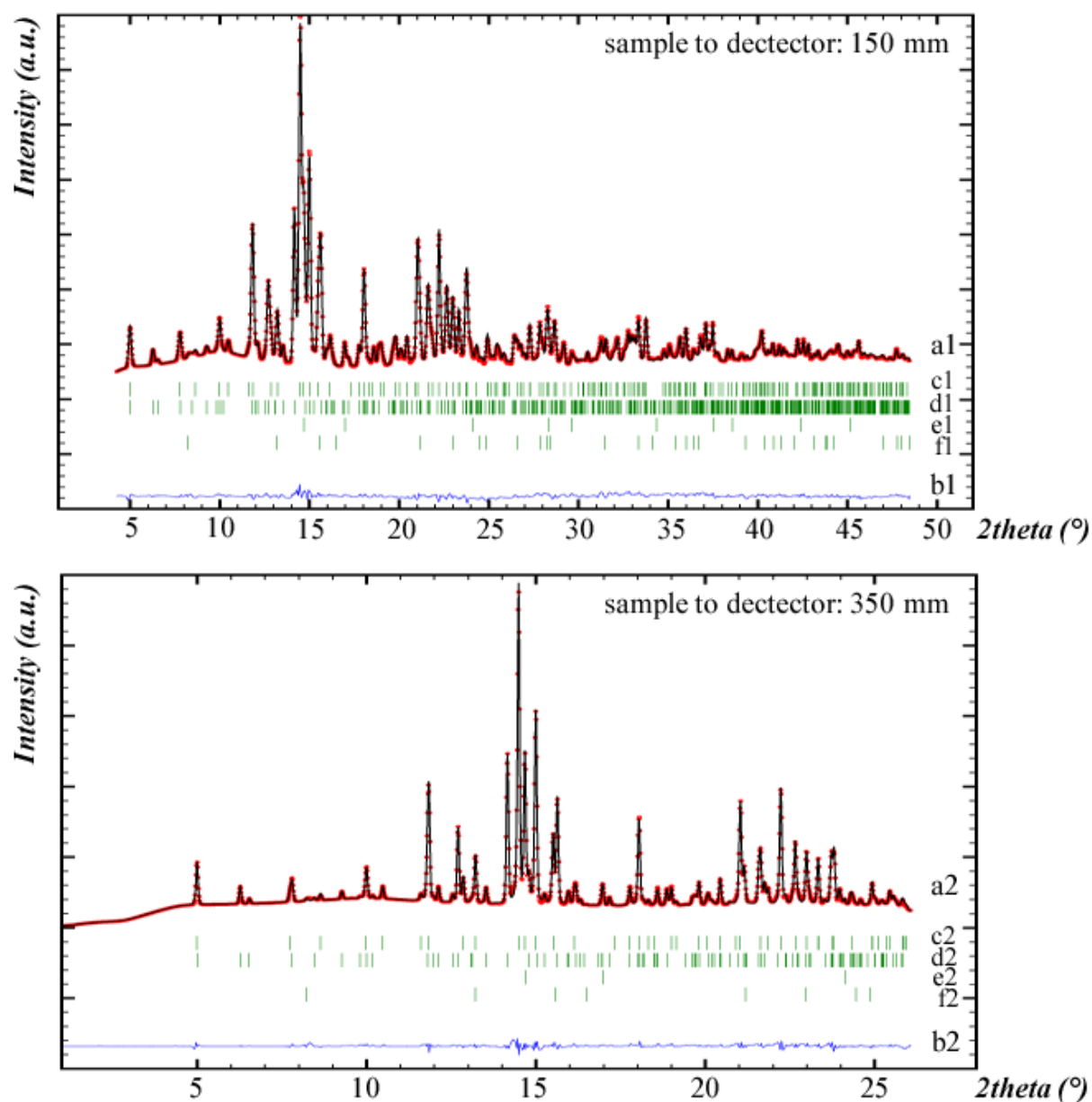
Figure S4: Powder patterns from the joint Rietveld on the Sr:HAp sample. Two sample-to-detector distances represent top (150 mm) and bottom (350 mm) plots. The data were collected at SNBL, ESRF with MAR345 Image Plate detector and $\lambda = 0.710130$ Å. Observed (a1 and a2; red dots), calculated (a1 and a2; black lines) and difference (b1 and b2; blue lines) powder diffraction patterns are presented. Bragg positions are indicated by green vertical bars for hydroxyapatite (c1 and c2), whitlockite (d1 and d2), lime (e1 and e2) and portlandite (f1 and f2).