



Plate III

Fig. a. — X-ray pattern of isolated by-product in sample 2.5, and schematic representation of literature reference pattern of γ -AlOOH.

Fig. b. — Na⁺ substituted preparation typical for series 2 as *fig. b* on Plate II, but direct preparation. Sample 2.5. $\times 12,000$. $\text{LiAl}_2\text{Mn}_3\text{O}_9 \cdot 3\text{H}_2\text{O}$ can not be distinguished from γ -AlOOH.

Fig. c. — Selected area electron diffraction of γ -AlOOH single crystal isolated from sample No. 2.5 (*fig. b*).

Fig. d. — Selected area electron diffraction of by-product in series 2, forming rafts of needles (*fig. e*).

Fig. e. — By-product typical for Na⁺ containing preparations (series 2). Electron diffraction with streaks perpendicular to direction of needles is shown in *fig. d*; $\times 15,000$.

Fig. f. — Same, but carbon replica, Cr shadowed; $\times 15,000$.