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**Quantification of growth factor levels using a simplified method of platelet-rich plasma gel preparation.**

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**PURPOSE:** This study compared two methods of preparing platelet-rich plasma (PRP) gel and the levels of PDGF and TGFbeta in each preparation.

**MATERIALS AND METHODS:** Platelet-rich plasma gel was prepared by centrifugation and clotted using the ITA gelling agent (Natrex Technologies Inc, Greenville, NC) or by the addition of thrombin and calcium chloride. The levels of platelet-derived growth factor (PDGF) and transforming growth factor beta (TGFbeta) generated by clot formation were assayed by enzyme-linked immunoassay (ELISA).

**RESULTS:** Both methods of preparation yielded PRP gel in less than 30 minutes. However, the ITA preparation did not require thrombin to achieve adequate gel formation. The levels of PDGF and TGFbeta were similar regardless of which method was used for initiation of clot formation.

**CONCLUSION:** Use of ITA for gel preparation is equivalent to using calcium chloride and thrombin, without the need for special equipment and the risk of coagulopathy.

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