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### Total, Insoluble and Soluble Oxalate Contents of Three Pakistani Legume Flours

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Oxalate is widely distributed in plant foods as potassium, sodium and ammonium oxalates (water-soluble form) and as insoluble calcium oxalates. Oxalate forms strong chelates with dietary calcium, thus rendering the complex unavailable for absorption and assimilation. It precipitates as insoluble salts accumulating in the renal glomeruli and contributes to the development of renal disorders. The seed flours of *Macrotyloma uniflorum* (Lam.) Verdc., *Phaseolus lunatus* Linn., and *Phaseolus vulgaris* Linn., were investigated for their total, soluble and insoluble oxalate contents by HPLC. The total oxalate content of *M. uniflorum*, *P. lunatus* and *P. vulgaris* were found to be 1.24, 1.77 and 1.71 mg/ g respectively. The %age of soluble oxalate were *M. uniflorum* (19.50), *P. lunatus* (15.08) and *P. vulgaris* (15.88). Only soluble oxalate is responsible for oxalate absorption (bioavailability) and its excretion. Overall total oxalate contents are high in legume flour of *M. uniflorum*, *P. lunatus* and *P. vulgaris* but soluble oxalates are very low. Therefore, all these three legumes don't have adverse effect of oxalate on minerals bioavailability and risk of urolithiasis.