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Correction to my paper: On integral normal bases over intermediary fields

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CORRECTION TO MY PAPER ON INTEGRAL NORMAL BASES
OVER INTERMEDIARY FIELDS*)

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As pointed out by E. J. Gómez Ayala, Proposition 2 of the paper is not correct. Since the conclusion of Proposition 2 is not true it can not be said that Theorem 1 holds in both directions. It should read:

Theorem 1. *Let M, L, K be algebraic number fields such that $M \supset L \supset K$ and all extensions are Galois. If there exists an element α which generates an integral normal basis for both M/K and M/L then there exists a unit $\gamma \in Z_L$ which generates an integral normal basis for L/K .*

Nevertheless, the original Theorem 1 remains true for special cases, for example:

Theorem. *Let K_i/Q ($i = 1, 2$) be Galois extensions of degrees n_1, n_2 with relatively prime discriminants $d(K_1), d(K_2)$, and let $L/Q = K_1K_2/Q$ be their composite. Let there exist an integral normal basis for L/Q . Then there exists an element α which generates an integral normal basis for both L/Q and L/K_1 if and only if there exists a unit which generates an integral normal basis for K_1/Q .*

*) Czechoslovak Math. J. 39, 114, 1989, 622–626