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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  $\alpha$  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  $\alpha$  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  $K_1/Q$ .*

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