

4. "Eriocomine" lacks the properties which would justify regarding it as a possible oxytocic and uterine hemostatic comparable to ergot and pituitary, but it may act as an irritant ecboic.

COMPARATIVE MARRUBIIN CONTENT IN MARRUBIUM VULGARE FROM EUROPEAN VS. AMERICAN SEED.

BY ADELIA MCCREA.*

Marrubium vulgare L., the perennial white horehound, is a common garden plant. While it is frequently used as a potherb and for flavoring, it is also of some interest medicinally. This is probably due to its glucoside content, the crystalline principle marrubiin; and it was in regard to this property that the tests herein described were made.

It has been considered that, in its characteristic physiological activity, European marrubium was better than American plants which were stated to be without marrubiin. Since it is the same species, botanically, ours having been naturalized from Europe, so marked a difference was difficult to explain; hence an experiment was designed to give further comparative data.

For this, seed was obtained from three sources: France, Germany and American-grown (Michigan). A light, slightly acid, sandy soil was chosen, as the plant seems to prefer such a type; and the seed lots were planted in adjacent beds. The French seed germinated first, then the American, and lastly the German; but at harvest time all beds were closely approximate in growth, and no distinction was visible in herbage or bloom.

As marrubium belongs to the *Labiatae*, it was considered probable that maximum yields would be obtained from flowering plants, as is true of other mints. All were therefore cut while in bloom, using the flowering parts, with a minimum of stems. They were carefully dried at a moderate temperature, about 40° C., until brittle; then ground to a fine powder and processed for the glucoside.¹ All were found to be practically identical in physical appearance and melting points, as shown in the tabulation below; but there is considerable variation in the amount of marrubiin present.

Seed source.	Per cent of marrubiin.	RELATIVE MARRUBIIN VALUES.	
		Melting point.	Remarks.
French	0.34%	156-159° C.	Readily freed from waxes
German	1.00%	156-158.5° C.	Readily freed from waxes
American	0.47%	156-158° C.	Separated with difficulty.

It is interesting to note that all three samples possess a good content of the characteristic glucoside, the French running lowest of the three instead of highest as had been expected. It is therefore concluded that the reported lack of marrubiin in American marrubium has been due to faulty methods of culture, to failure in separating the waxes, or to both of these factors. Certainly, it is present in plants grown and harvested under proper conditions.

* Research Department, Parke, Davis and Company.

¹ Chemical extraction and testing were done by W. F. Kamm of this Laboratory.