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ON  
  
INDIGO-BLUE  
  
FROM  
  
*POLYGONUM TINCTORIUM*  
  
AND  
  
OTHER PLANTS.

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BY  
EDWARD SCHUNCK, PH.D., F.R.S.

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SOME papers read before the Society many years ago, and subsequently published in its 'Memoirs'\*, contain an account of my experiments with the leaves of the *Isatis tinctoria*, or common woad, the well-known plant employed in Europe for dyeing blue before the introduction of indigo from the East. I showed that the leaves of this plant do not, as some have supposed, contain either indigo-blue or its hydride ready formed, but yield by careful treatment a peculiar glucoside—indican—which, when acted on by acids and other reagents, splits up into indigo-blue and indigoglucine, the latter being a body resembling glucose. My experiments also show that this substance, indican, is a highly unstable body, undergoing when its watery solution is heated for some time, or, more rapidly, by the action of caustic alkalies, an entire change, on the completion of which it no longer yields indigo-blue by decomposition with acids, but in place of the latter gives indigo-red, indifulvine, leucine, and other products. Though I succeeded in ascertaining the composition of indican and the relation in which it stands to indigo-blue, the difficulty of obtaining large quantities of it in consequence of its excessive liability to change, prevented my proceeding further with the investigation. It seemed to me, however, that it might be of some interest to ascertain whether other indigo-

\* 'Memoirs,' ser. 2, vol. xii. p. 177, and vol. xiv. p. 181.