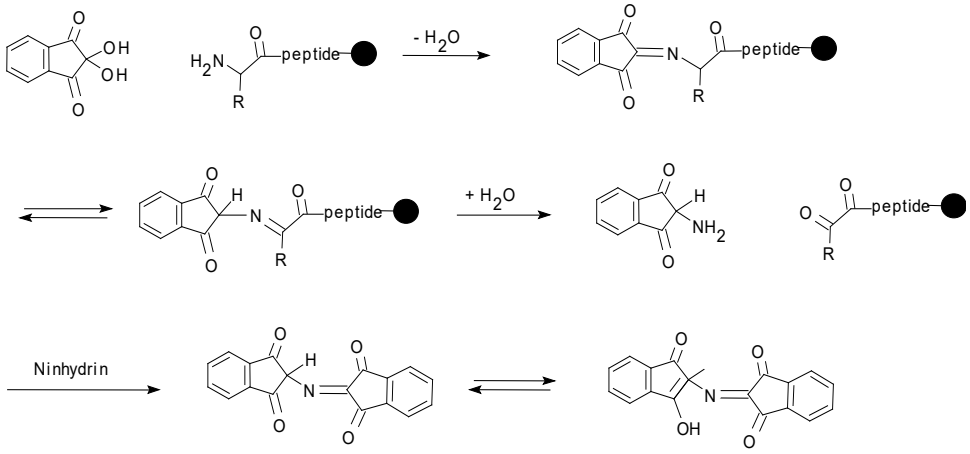
60017 Kaiser test kit

Product Description:
Colour test to monitor completeness of amino acid coupling in Solid Phase Peptide Synthesis (SPPS) and Solid Phase Organic Synthesis (SPOS). Intensive blue colour is generated by reaction of ninhydrin with free primary amines (see scheme below). The test can be used to monitor the presence of free amine after deprotection (dark blue colour) and the completeness of the amino acid coupling step (yellow colour). The test is routinely applied qualitatively[1] and quantitatively[2]. It is important to state that the test does not yield the typical dark blue colour with serine, asparagine, aspartic acid[3], and proline (secondary amine).



Ruhemanns Blue

Kit components
The Kit contains 50 ml of each: phenol, 80% in ethanol, KCN in H_2O/ pyridine and Ninhydrin, 6% in ethanol.

Procedure
Remove a few resin beads from the reaction vessel and wash 3 times with ethanol (02860). Transfer beads into a small glass tube and add three drops of each solution. Mix well and heat the tube at 120°C for 5 minutes. The resin beads and the solution turn dark blue when primary amine is present. The resin beads remain their colour and the solution stays yellow when no free primary amine is present (expected result after successful coupling). A re-coupling step is necessary when a slight blue colour is detected in the solution and/or on beads.

References
1) E. Kaiser, R. L. Colescott, C. D. Bossinger, P. I. Cook, *Analytical Biochemistry* 34 595 (1970)
2) V. K. Sarin, S. B. H. Kent, J. P. Tam, R. B. Merrifield, *Analytical Biochemistry* 117 147 (1981)
3) J. D. Fontenot, et al. *Peptide Research* 4 194 (1991)

Precautions and Disclaimer:
For Laboratory Use Only. Not for drug, household or other uses.