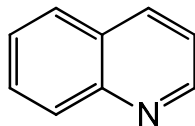
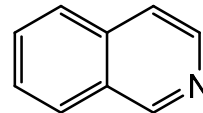


8. Pierścienie sześciocznowe z jednym heteroatomem, chinoliny i izochinoliny

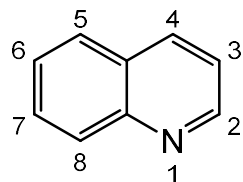


chinolina

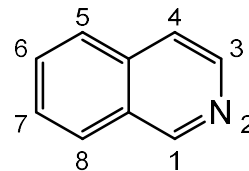


izochinolina

8.1. Chinoliny i izochinoliny, zasadowość

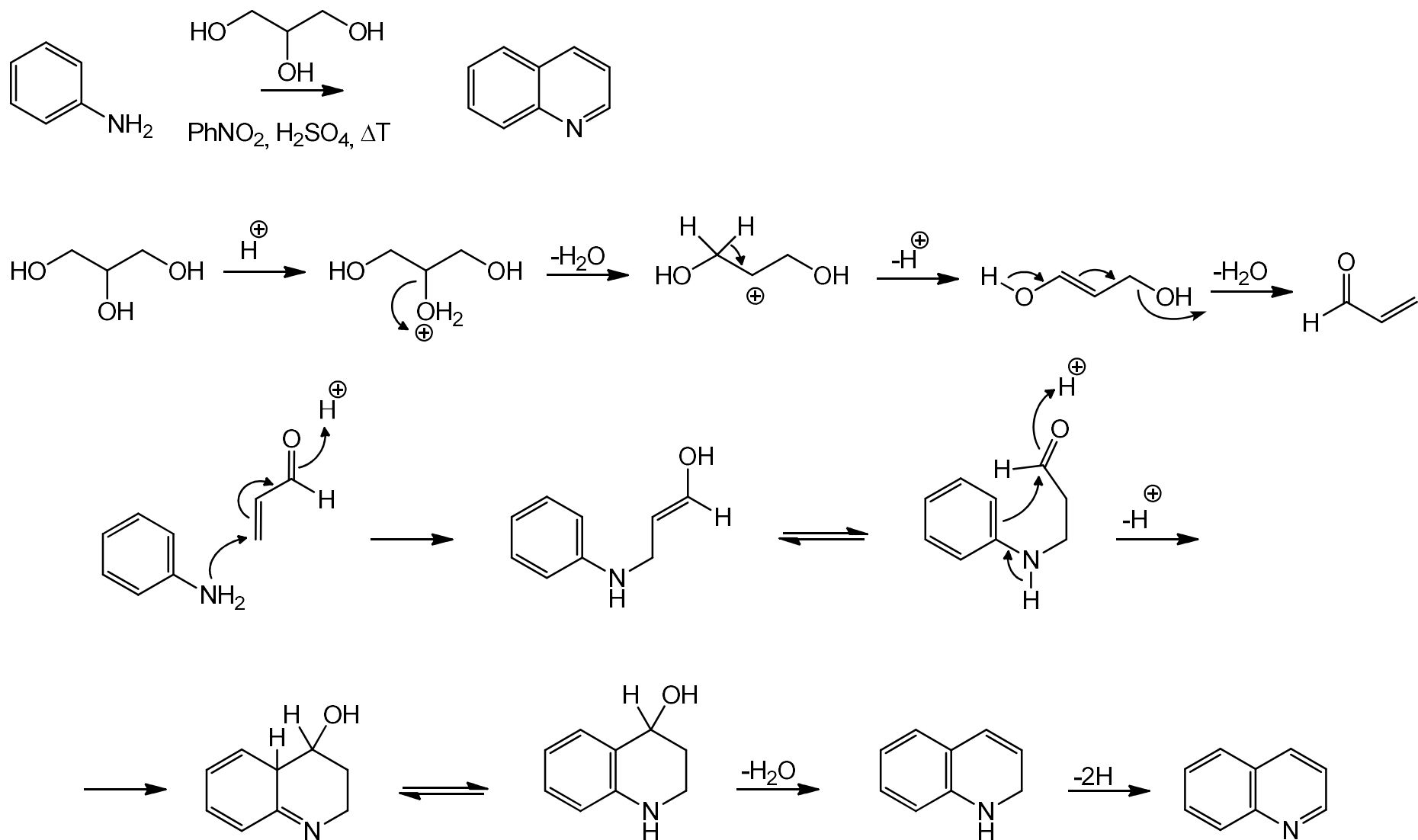


chinolina
 $pK_a = 4.9$
t.w. = 237 °C

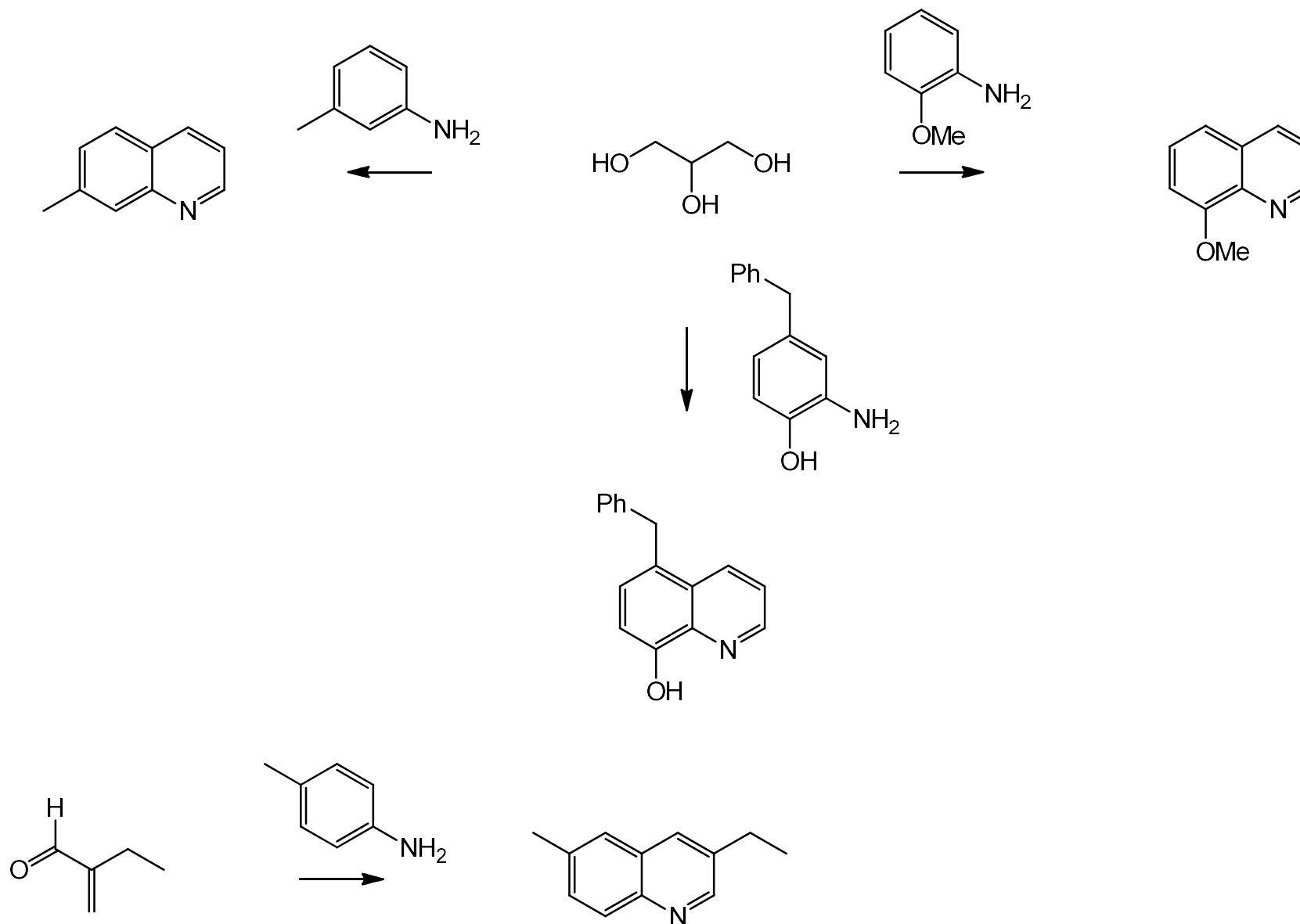


izochinolina
 $pK_a = 5.1$

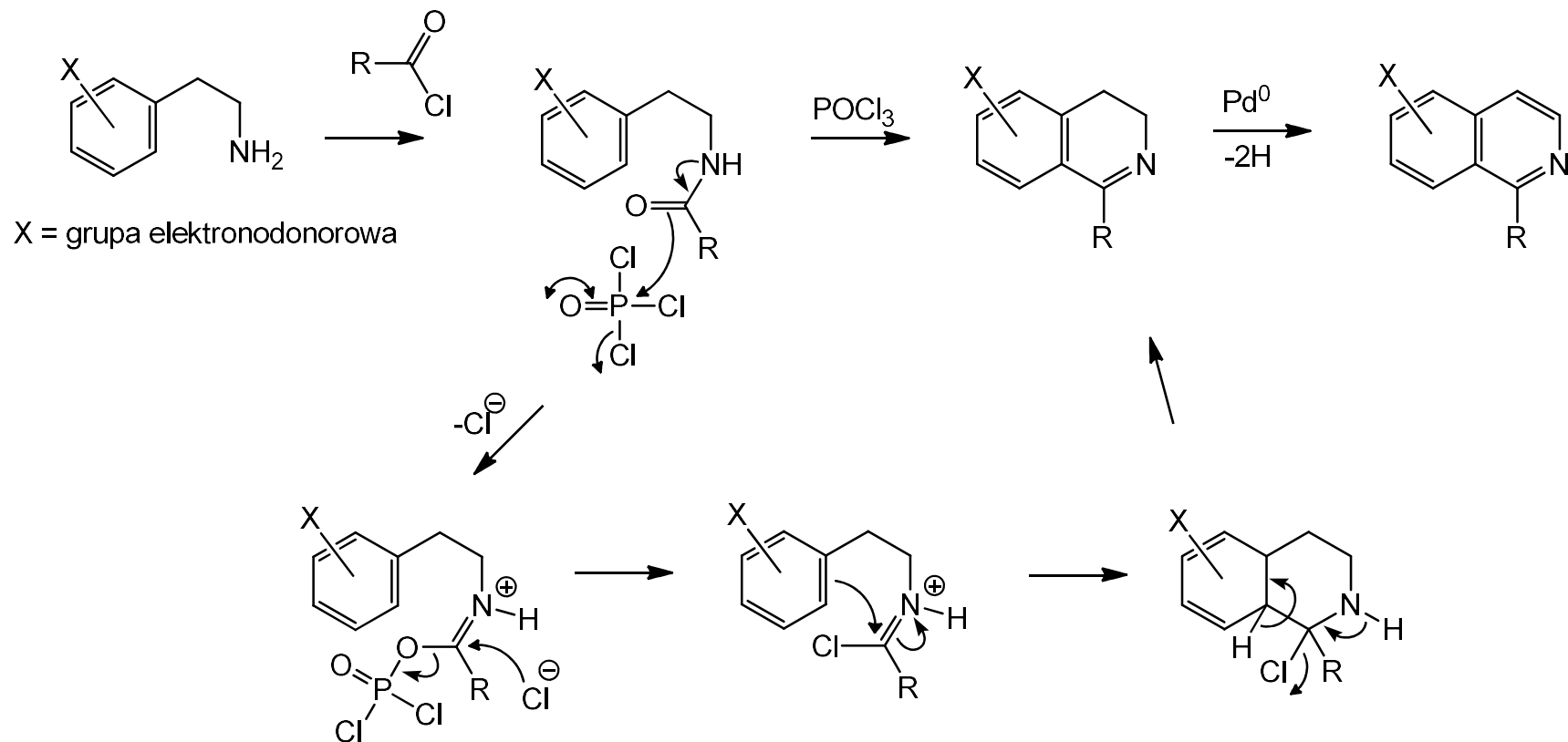
8.2. Chinoliny i izochinoliny - synteza chinolin metodą Skraupa, przebieg reakcji



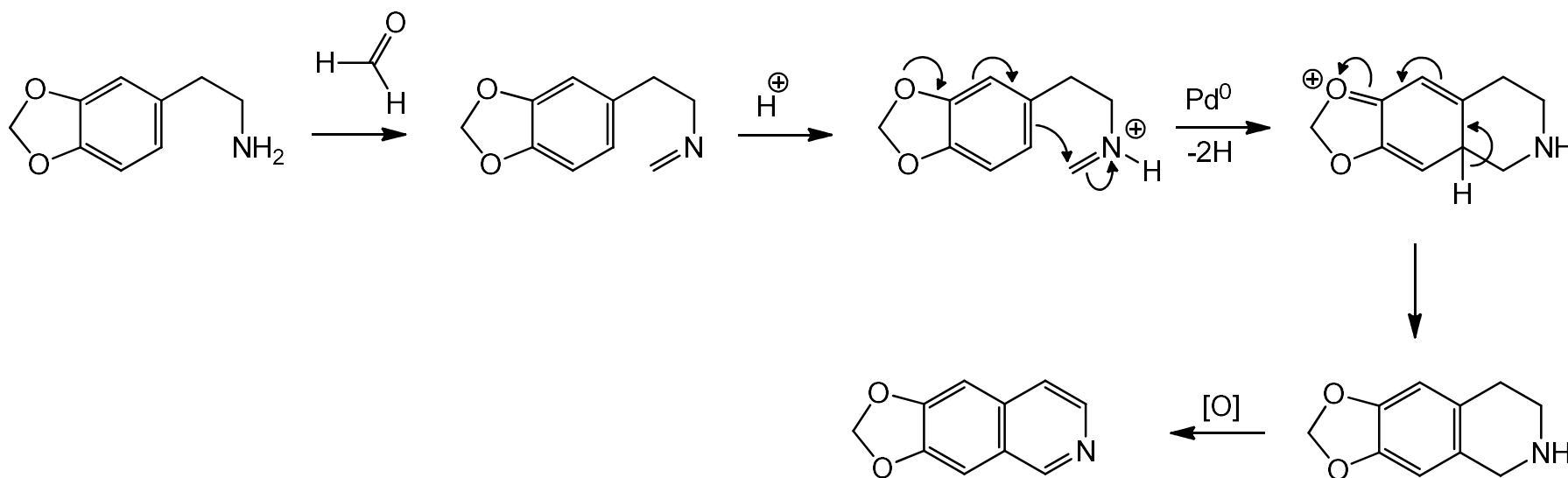
8.2.1. Chinoliny i izochinoliny - synteza chinolin metodą Skraupa, przykłady



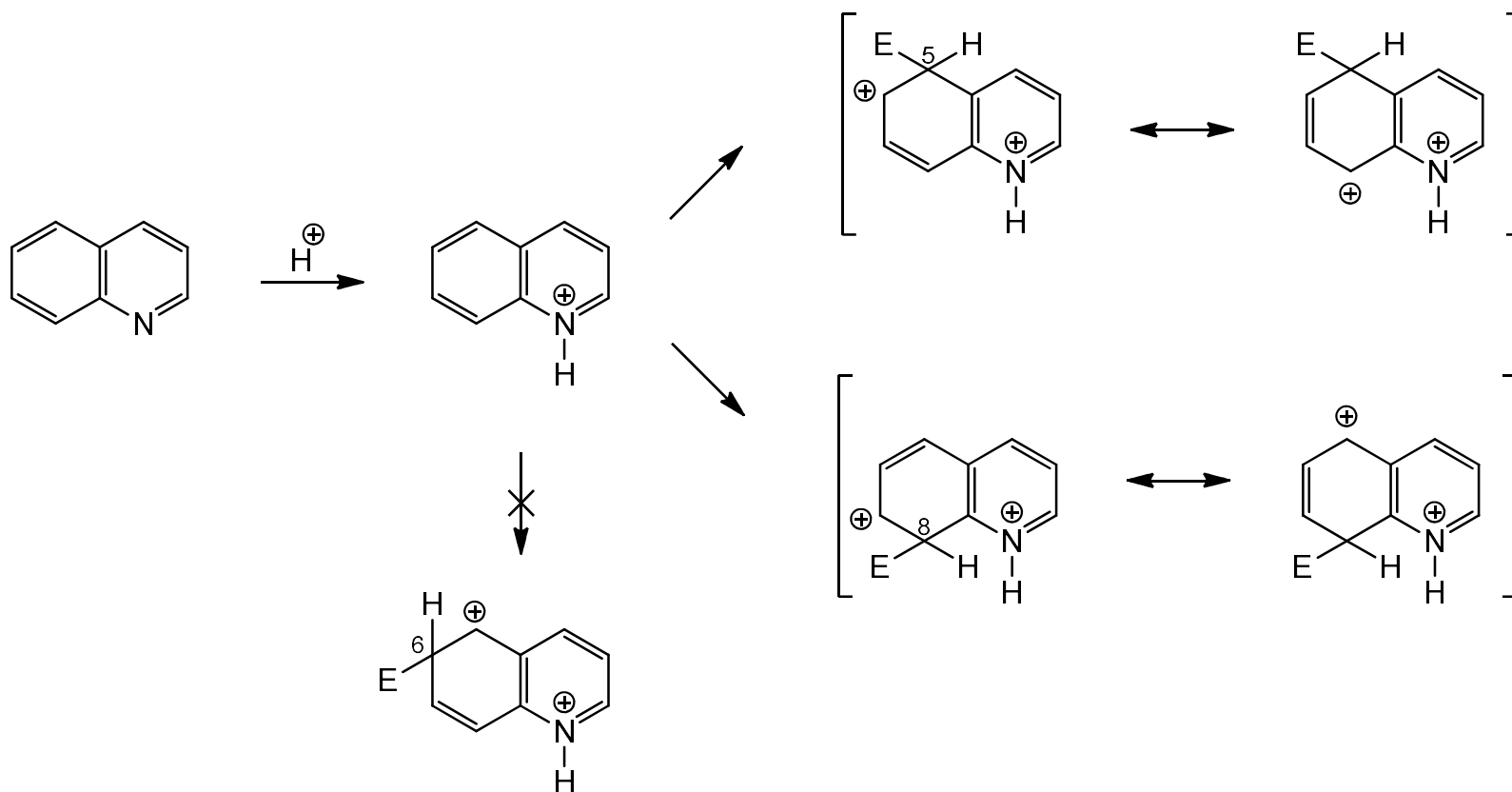
8.3. Chinoliny i izochinoliny - synteza izochinolin z β -fenyloetyloamin, metoda Bischlera-Napieralskiego



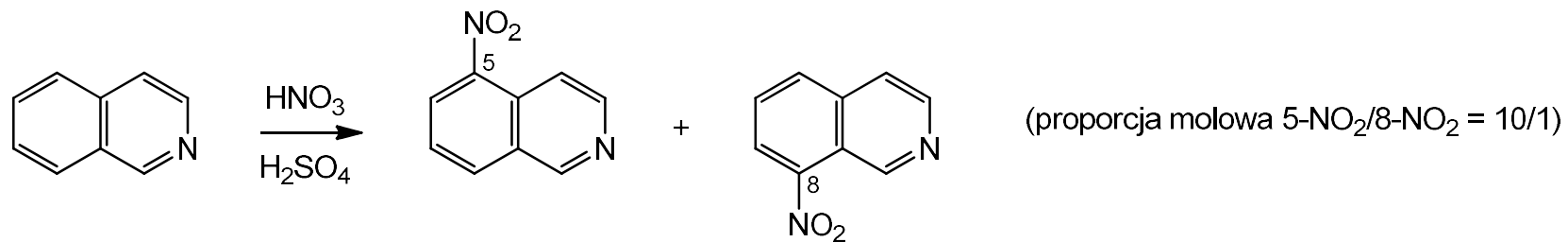
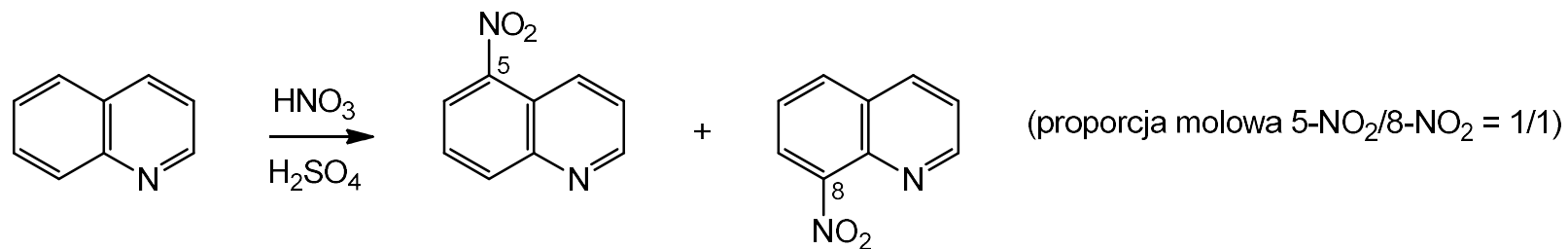
8.4. Chinoliny i izochinoliny - synteza izochinolin z β -fenyloetyloamin, metoda Picteta-Spenglera



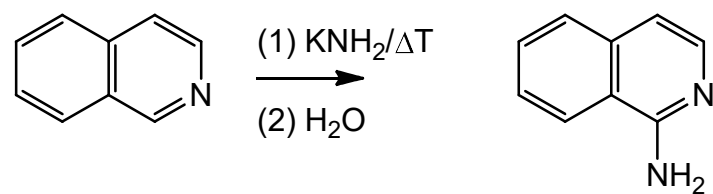
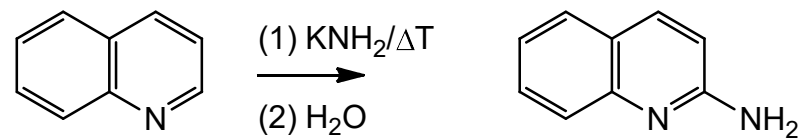
8.5. Chinoliny i izochinoliny - substytucja elektrofilowa, nitrowanie lub sulfonowanie



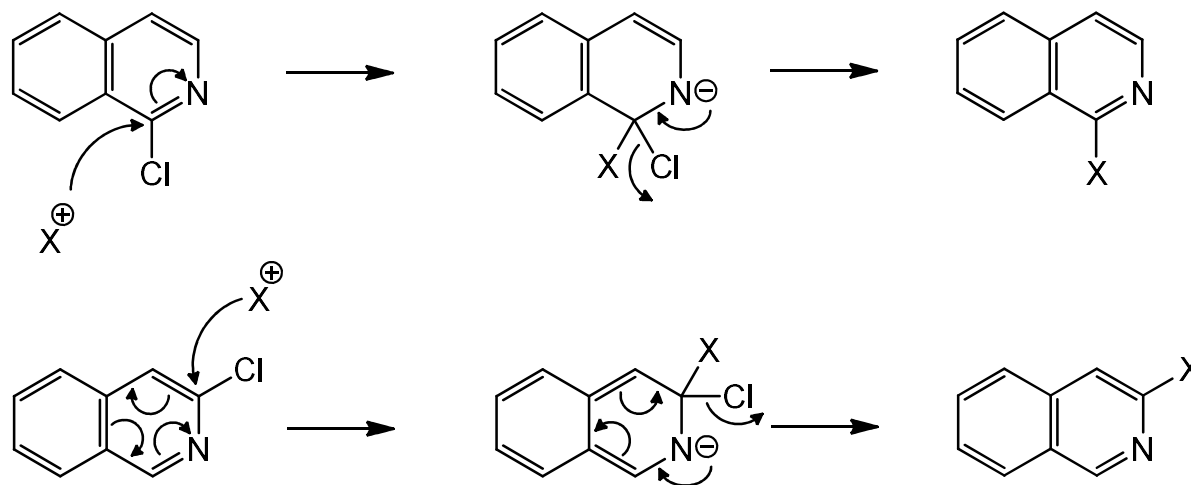
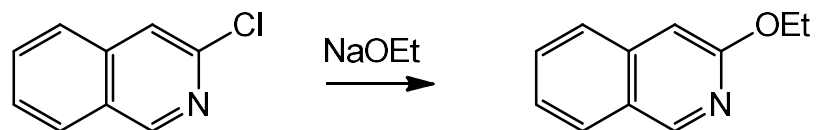
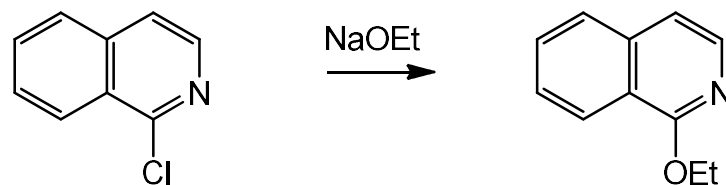
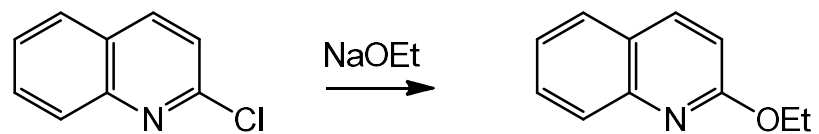
8.5.1. Chinoliny i izochinoliny - substytucja elektrofilowa, nitrowanie lub sulfonowanie, przykłady



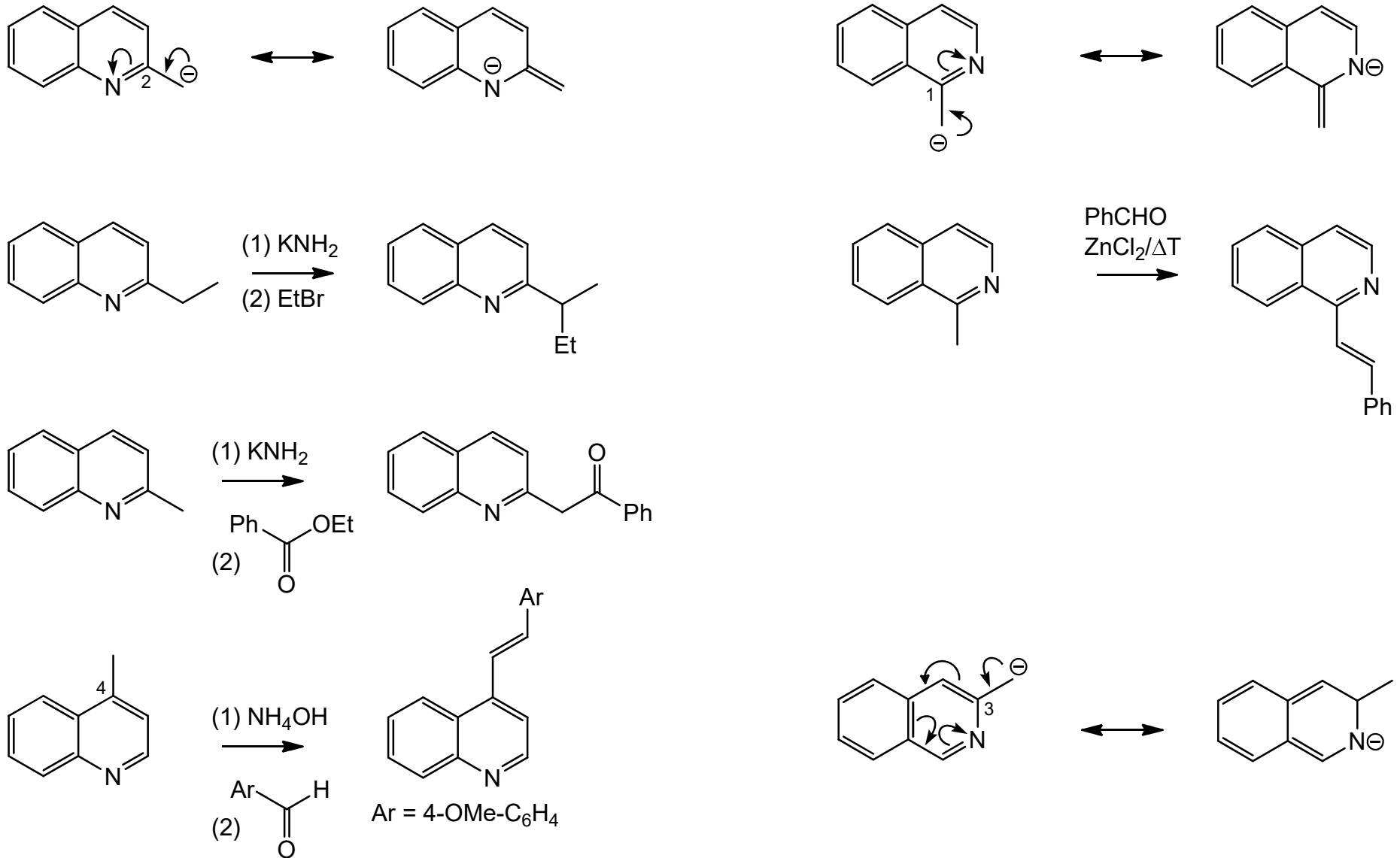
8.6. Chinoliny i izochinoliny - substytucja nukleofilowa, aminowanie



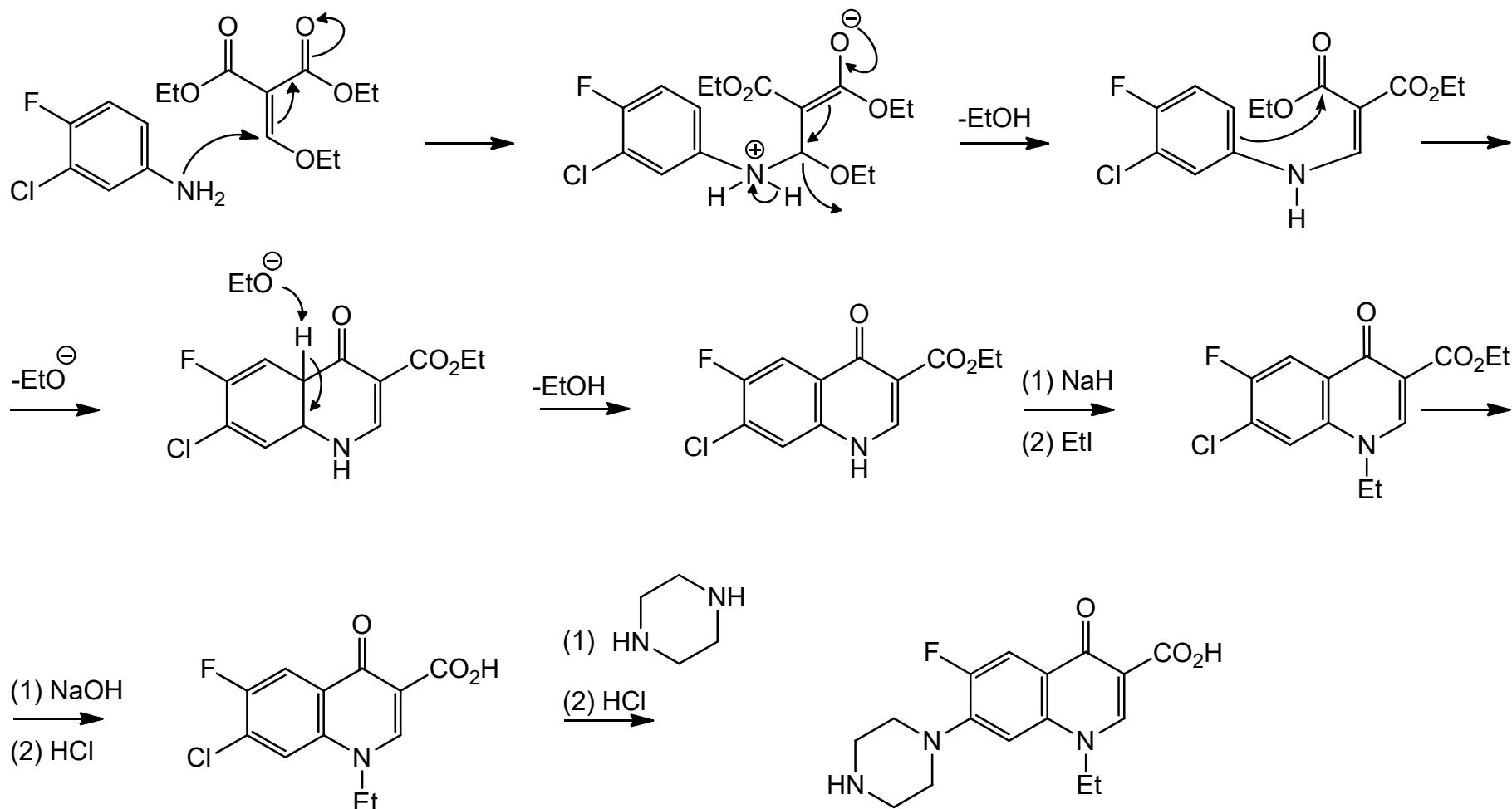
8.7. Chinoliny i izochinoliny - substytucja nukleofilowa w chloropochodnych



8.8. Chinoliny i izochinoliny - reaktywność karboanionów



8.9. Chinoliny i izochinoliny - synteza chinolonów metodą Goulda-Jacobsona, przykład



8.10. Chinoliny i izochinoliny - synteza wybranego alkaloidu, przykład

