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ORGANIC CHEMISTRY

Relations for the estimation of elements in organic compounds—

$$\% \text{ C} = \frac{12}{44} \times \frac{\text{mass of } \text{O}_2 \text{ formed}}{\text{Mass of the compound}} \times 100$$

$$\% \text{ of H} = \frac{2}{18} \times \frac{\text{Mass of H}_2\text{O formed}}{\text{Mass of the compound}} \times 100$$

$$\text{Nitrated ester} = \frac{\frac{2A}{14} \times \text{Volume of N}_2 \text{ at NTP}}{22400 \times \text{Mass of compound}} \quad 11:10$$

$$\% \text{ of N} = \frac{\text{Normality of acid used} \times \text{Volume of acid used}}{\text{Mass of the compound}} \quad \text{www.FirstRanker.com}$$

% of X(Halogerks) - $\frac{\text{Al mass of X}}{(\text{Q At, rroSS Of X})} \times 100$

74 6 5 32 Mass of enSO₄ formed
233 Mass of the compound $\times 100$

of P = cE M3ss of r49,15₂O, formed HID
MaT-.5 Of the corrvound

(1). Inductive effect

(+I effect) Cl-t, ;IC K C₃H₄ R₂O-1 Ftc K -6- Ft

Ofett R₄N > NO₂ > -EN > SO₃H COCPH -F > C1 > 1 > -OR > -OH > -NH₂

{2 Relative basic strength in aqueous medium.

R O ₂ S	- > > 3° > NI-I ₃
R	2° > 3° > 1° > NI-I ₃
IDE, C11-	1D NH ₃ > > R
m2c	- To. R

{3 Stability of free radical

C-5 Me₃ CHAuleCIH, >IVle
P

{4 Heat of hydrogenation of alkenes

1-butene cis-2-butene trans-2-butene

(511. Leaving nature in Nucleophilic substitution reaction

Ar5.0c > R05O₂ > CH₃CCP0⁻ > 1:31⁻ > O⁻H > > R⁻

{611. Number of product formed clurin8 crossed a lIdol condensation

id N ↳	Carbonyl compound	Carbonyl compound III)	Self	Gross	Total
	10		Condensation	CeprtienSklbeI	PrOdUtt
1. 1.	One type of similar .. H-atom	One type of similar , H-atoms		2	4

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	0 II $\text{CH}_3 - \text{C} - \text{H}$	$\text{CH}_3 - \text{CH}_2 - \text{CHO}$			
2.	Two different types of dissimilar H-atoms $\text{CH}_3 - \text{COCH}_2\text{CH}_3$	One type of similar „H-atoms 0-14 - O ₂ - a-K)	3	3	6
3	Two different types of dissimilar H-atoms $\text{CH}_3\text{CO} - \text{CH}_2 - \text{CH}_3$	Two different types of dissimilar H-atoms Ph - I ₂ - CO - Cl ₃ - CH ₃	4	4	8