

$$d_{\min} = \frac{1.22 \lambda}{2 \mu \sin \theta}$$

Where μ is the refractive index of the medium present between the object and objective lens & θ = half of the angle formed at the object by the objective lens.

The quantity $\mu \sin \theta$ is known as '*numerical aperture*' of the objective lens.

So, resolving power of microscope is

$$\text{R.P} = \frac{2 \mu \sin \theta}{1.22 \lambda}$$

To get a high value of resolving power, the value of numerical aperture must be large. To increase numerical aperture of the objective lens generally the objective lens of a microscope is immersed in oil of high refractive index. Such an arrangement is called oil immersion objective.

Also lesser the value of wavelength being used to illuminate the object more is the resolving power of the microscope.