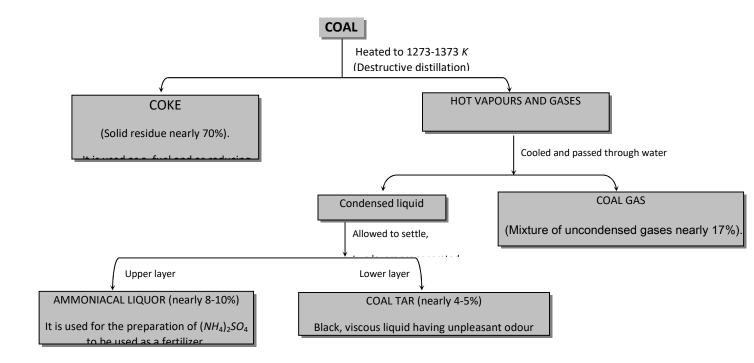
Source of Arenes.

Source of arenes is coal. It contains benzene, xylene, naphthalene etc. Arenes are obtained by destructive distillation of coal.

(1) Distillation of coal



Note: Coal tar is a mixture of large numbers of arenes.

(2) Distillation of coal tar: Arenes are isolated by fractional distillation of coal tar,

Name of the fraction	Temperature range (K)	Main constituents
Light oil (or crude oil) fraction	Upto 443	Benzene, toluene, xylene
Middle oil fraction (Carbolic oil)	443-503	Phenol, naphthalene, pyridine
Heavy oil fraction (Creosote oil)	503-543	Naphthalene, naphthol and

		cresol
Green oil (Anthracene oil)	543-633	Anthracene, phenanthrene
Pitch (left as residue)	Non-volatile	Carbon

Note: The residue left after fractional distillation of coal-tar is called pitch.

Light oil
$$\xrightarrow{\text{cold } H_2SO_4}$$
 Basic impurities removed $\xrightarrow{\text{NaOH}}$ Phenols removed $\xrightarrow{\text{distillation}}$ Benzene (255 - 257 K) Toluene (383 K)