

Mühendislik Fakültesi



Kimya Mühendisliği Bölümü

KMB322-Polimer Kimyası ve Teknolojisi

Dr. Öğr. Üyesi, İsa DEĞİRMENCI

Poliüreler ve Polikarbonatlar

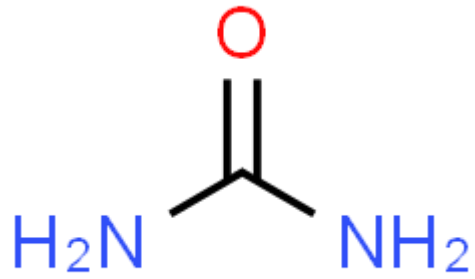
KMB322-Polimer Kimyası ve Teknolojisi

Hafta-6

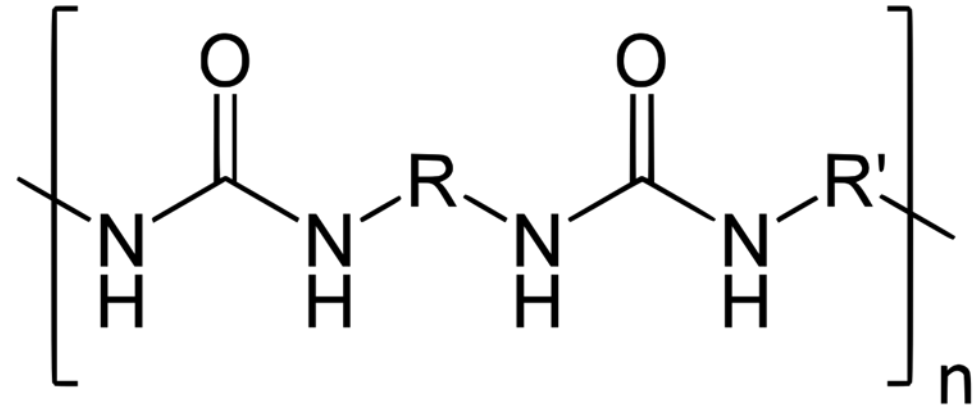


Poliüreler

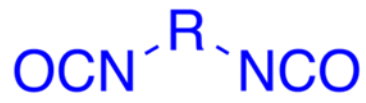




Üre



Poliüre yapısı

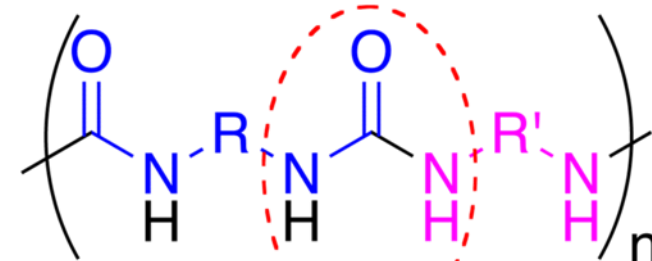


Diizosiyanat

+

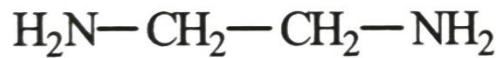


Diamin



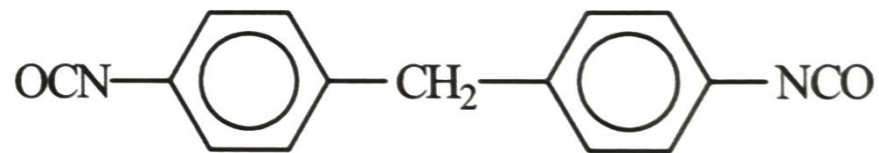
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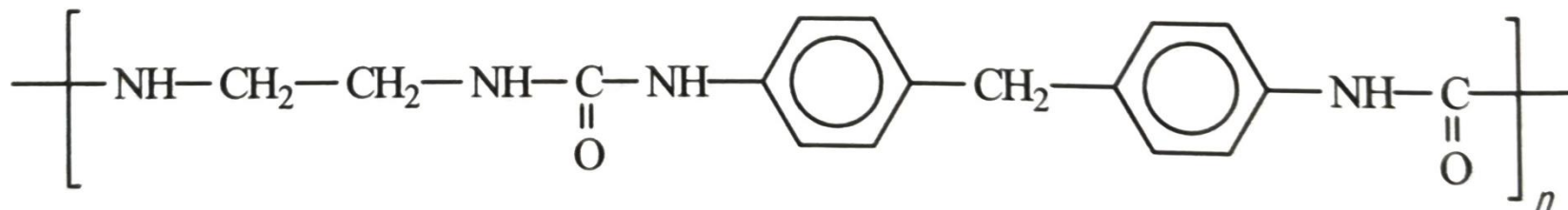


etilen diamin

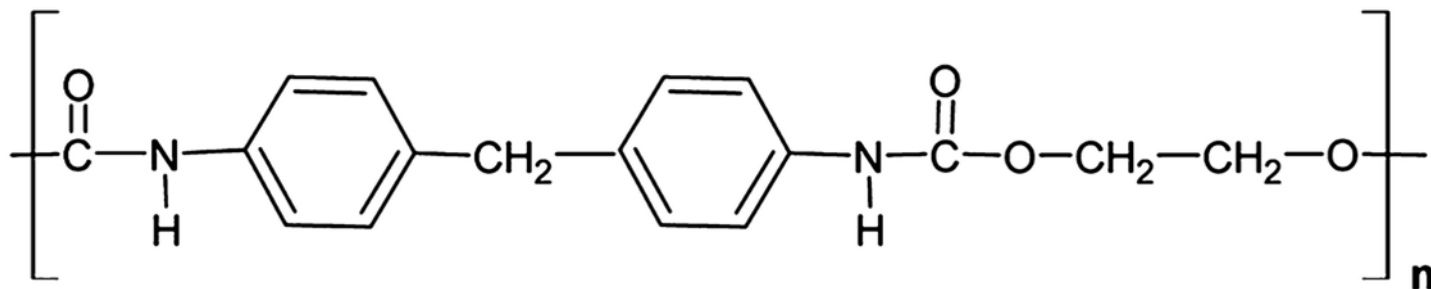
+



difenilmetan-4,4'-diizosiyanat



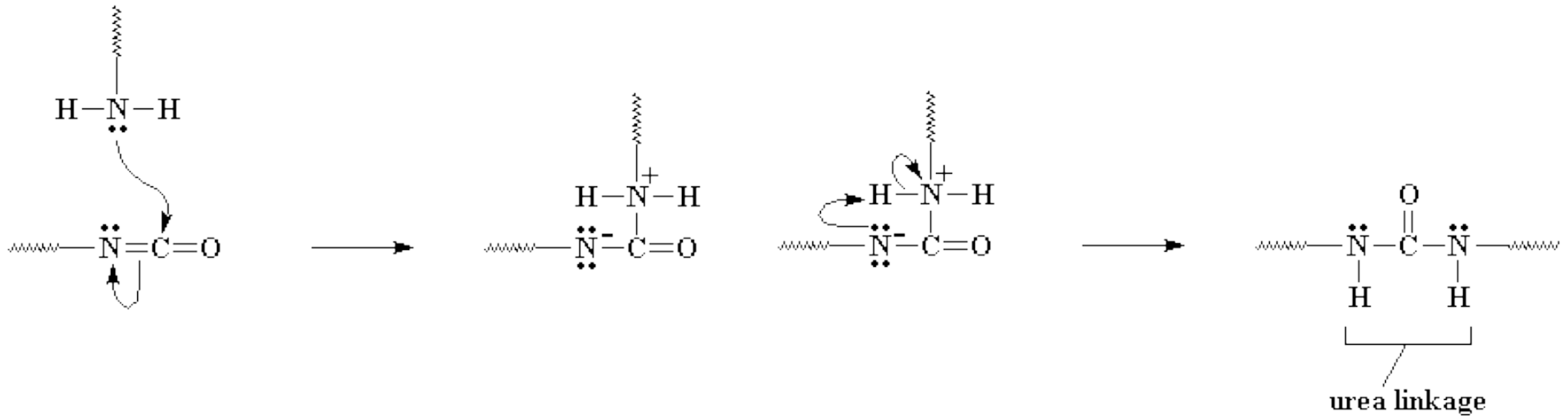
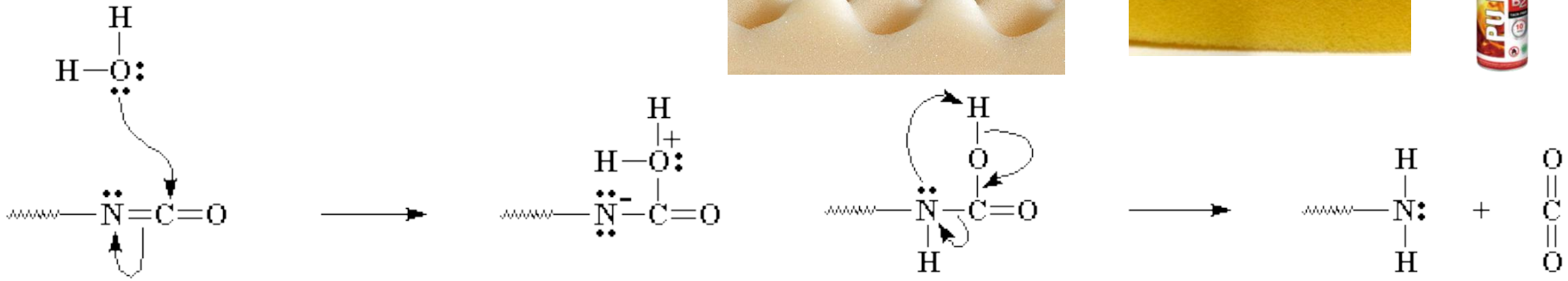
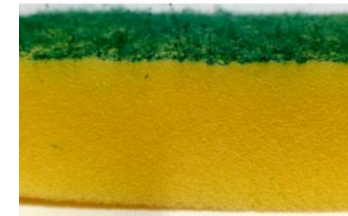
poliüre



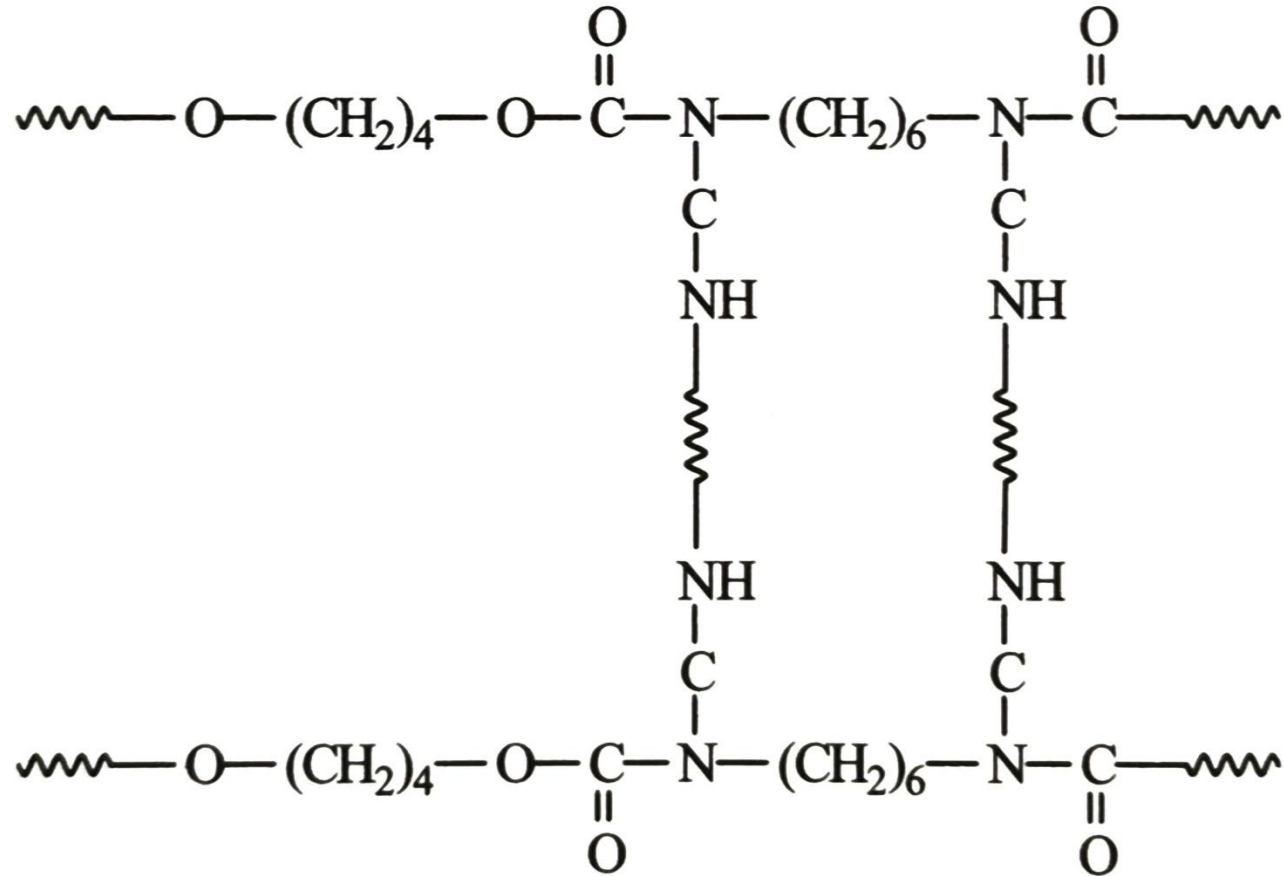
poliüretan



PU Köpük oluşumu



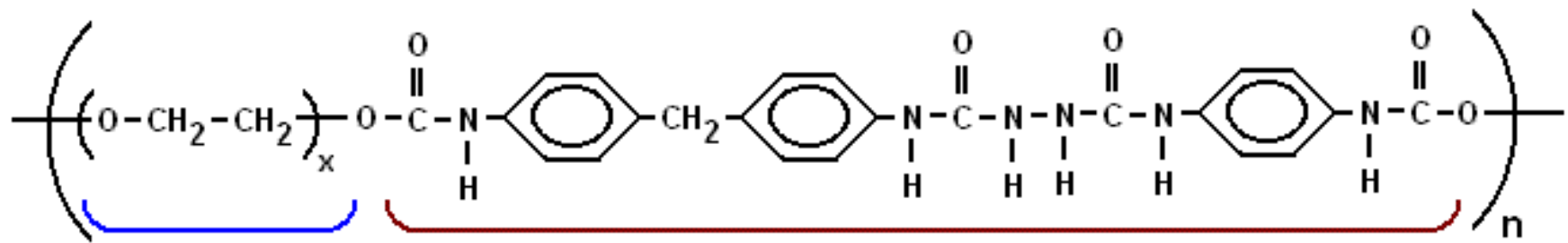
Çapraz Bağlı Poliüretan



çapraz bağlı poliüretan
(allofanat)

Spandex (Lycra), 1959, DuPont, (Joseph Shivers) Termoplastik elastomer



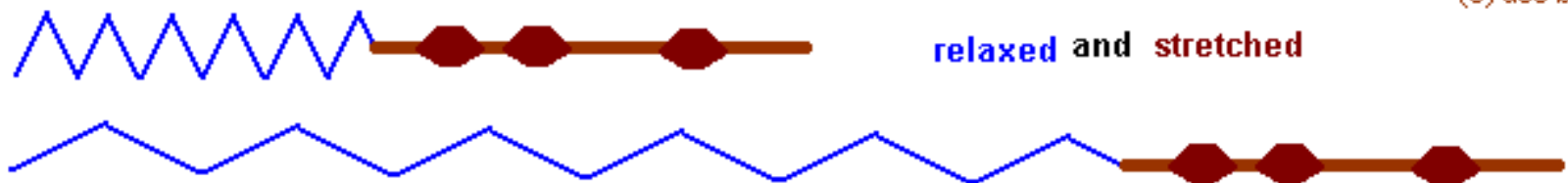


flexible stretching
molecular segment
softer - rubbery in character
- gives the fibre elasticity

rigid segment of the polymer molecule
gives the polymer strength - hence the strength
and durability of Lycra-Spandex fibres

Think of the 'molecular' situation in the simpler way illustrated below

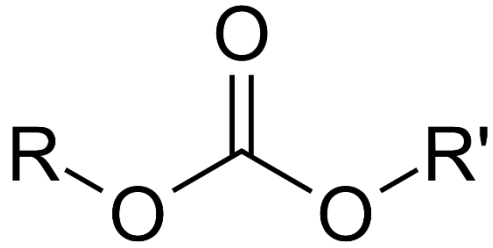
(c) doc brown



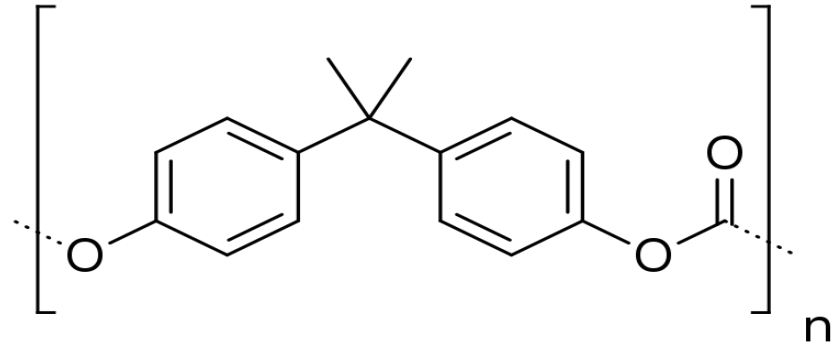
the diagram represents a single 'double' molecular segment, un-stretched and stretched, and so this is repeated down the polymer molecule, which ultimately makes the way the fibre behaves

Polikarbonatlar

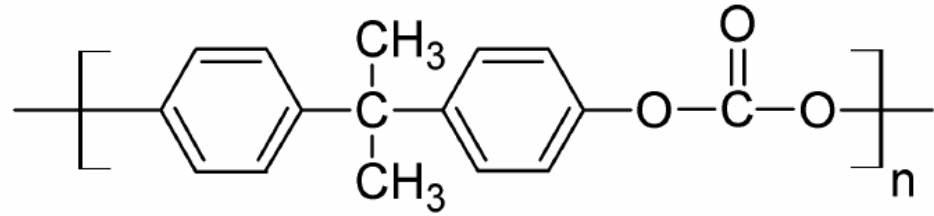




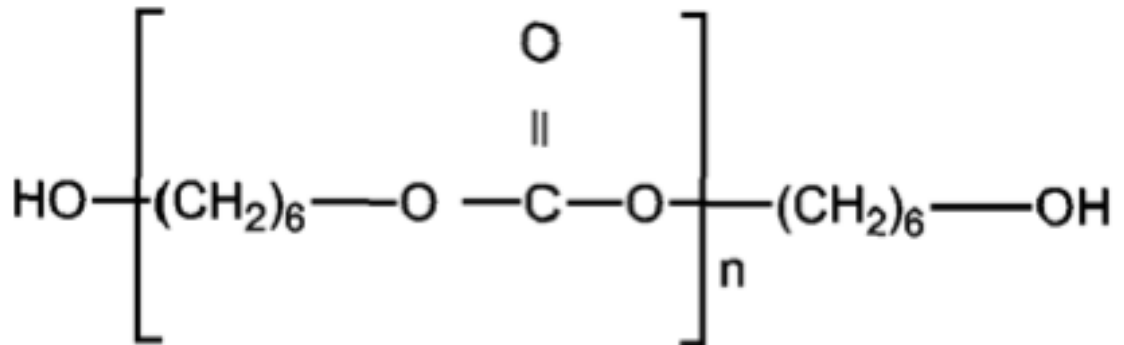
Karbonat Bağı



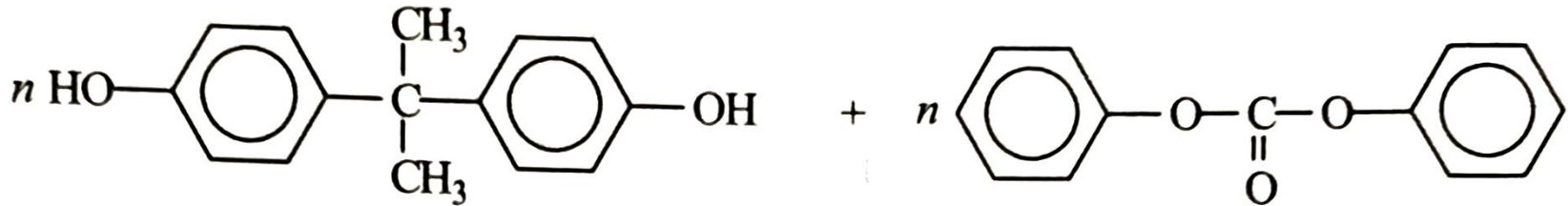
İlk polikarbonat, 1898,
Almanya



1953, Bayer, Almanya
İlk doğrusal polikarbonat

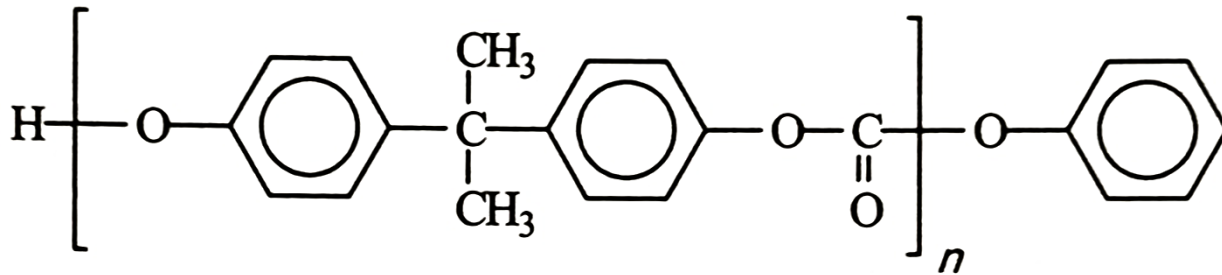
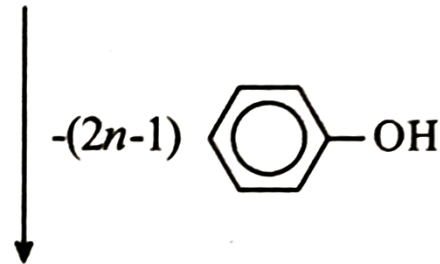


Polikarbonat sentezi



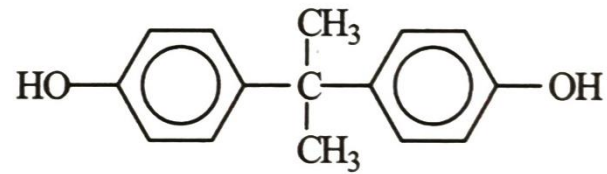
bisfenol A

bifenil karbonat

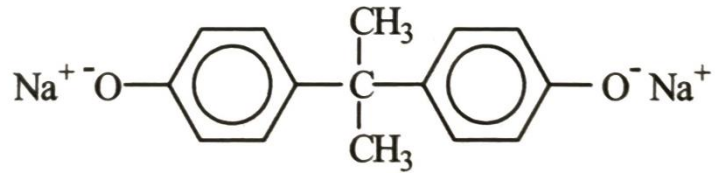
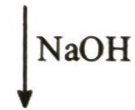


polikarbonat

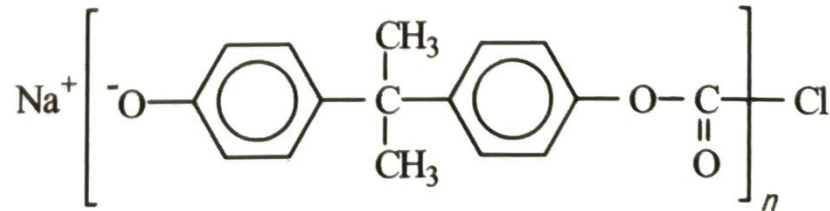
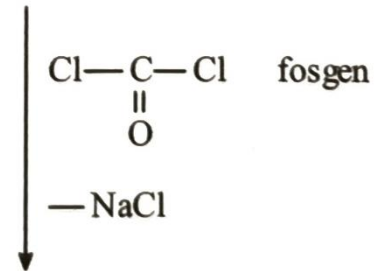
2. Yöntem



bisfenol A



bisfenol A sodyum tuzu



polikarbonat