

## E Thioesters Are More Reactive Than Esters

Nature uses *thioesters* for intracellular acylation.

The pKa of thioethanol is 10.6 whereas that of ethanol is 15.9. EtSH is therefore a *stronger / weaker* acid than ethanol, EtS<sup>-</sup> is a *better / worse* leaving group than EtO<sup>-</sup>, and thioesters will undergo reactions in cells under *milder / harsher* conditions than esters would.

Look up the structures of coenzyme A and acyl-CoA and write them below.

MY APOLOGIES: somehow several "5"s are missing in the book.

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*coenzyme A or CoASH*

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*acyl coenzyme A or acyl-CoA*

The leaving group in these molecules is *huge / small* compared to acyl.

Thioesters are *better / worse* electrophiles than esters.