Video « Ion pair extraction – Mixing »

Time	Text
00 :09	Today I am going to present you how to perform the titration of bases, or base salts, by the DOSS solution. In that case, the studied base salt is the lidocaine hydrochloride.
00 :18	Here are presented the reactants and solvents which are necessary for the titration. First, I am going to mix these reactants and solvents with the product which has been previously weighed.
00 :30	As you can see, I weighed exactly 30 mg of lidocaine hydrochloride. I can make the mixture now.
00 :39	So, as solvents and reactants I have: - Distilled water - Acid buffer at pH 2.8 which is used to acidify the mixture as the titration needs to take place into an acid media. - The mixed indicator which allows to check the colour switch of the mixture. Therefore, it allows to get an approximation of the equivalence volume of the titration in a colorimetric way. - And finally, because this titration takes place into a biphasic mixture, dichloromethane as the organic solvent.
01 :13	Let's make the mixture into this erlenmeyer. First, I will dissolve as much lidocaine hydrochloride as possible into the distilled water. I am running the water along the wall of the flask to avoid any splash and I am dissolving the lidocaine hydrochloride by stirring slightly. As you can see, the lidocaine hydrochloride is well dissolved into the water, which is expected because it is a base salt.
01 :52	Now, I can add the acid buffer at pH 2.8. As I said earlier, it is to acidify the reaction, and so the base can be protonated. To get more information about the theoretical part of this titration, I am advising you to read the sheet which explains why the base needs to be protonated for the titration to happen.
02 :20	After the acid buffer, I can add the mixed indicator which is, as you can see, green.
02 :35	You can already see that the mixture will be biphasic. And in order to make things clearer, I am adding the dichloromethane in the quantity indicated in the sheet.
02 :59	Obviously, this experiment needs to be done under a hood because we are using dichloromethane which is an organic solvent with toxic vapours.
03 :08	Now, let's stir it a bit. As this mixture is biphasic, a strong stirring is necessary and so I am going to add carefully a stir bar which allows to mix the titration well.
03 :28	So, the mixture is done. We get the biphasic mixture necessary for this titration of the lidocaine hydrochloride by the DOSS solution according to the pharmacology terms. The titration can be started.