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Study of Analysis of Purified and Water for Injection

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Purpose: Purified and for injection analysis of used water.

Materials and research methods: We are on FM Distillation, ion exchange, osmosis, medicine used for the preparation of refined products we controlled the water Refined and for injection The water used is an odorless, tasteless, colorless clear liquid and the amount of dry residues, reducing agents, carbon dioxide, nitrates and nitrites, ammonia, chlorides, calcium, it is free of sulfates and heavy metals, and we are one we learned as a result of how many reactions.

Research results: 1) We evaporate 100 ml of water in a water bath at 100-105 0C when we dried, the residue came out to be 0.000098%, from 0.0001% should not exceed.

- 2) Boil the same amount of ater, 1 ml 0.01 mol/l KMnO4 by adding 2 ml of diluted HCl for 10 minutes boiled The pink color of the solution remained and we again we are sure that there is no reducing agent
- 3) Take the water used for injection, equal to the water volume of lime water in a container with a tightly closed mouth When we charged it and watched it for 1 hour, it did not blur.if cloudy it would indicate the presence of CO2.
- 4) Carefully withdraw 5 ml of water for injection when we put a freshly prepared solution of diphenylamine blue color was not formed, this water contains nitrate and the absence of nitrites was known
- 5) 0.15 ml of Nessler's reagent per 10 ml of injection water 0.002ml of NH4+ ion in 1ml after 5 minutes 1 ml of stored standard is diluted with 9 ml of ammonia water and Compared to a mixture consisting of 0.15 ml of Nessler's reagent should not be darker than the color of the tested solution, due to the content of 0.00002 ammonium ions.
- 6) 0.5 ml of nitric acid solution in 10 ml of water for injection and Add 0.5 ml of silver nitrate solution and shake for 5 minutes we put it and it didn't even blur without power, that's the reason did not become cloudy due to the load of chlorides.
- 7) 0.5 ml of diluted hydrochloric acid and 1 ml per 10 ml of water We added barium chloride solution and shook it for 10 minutes We left it so that the solution should not be cloudy, and that's it and 1 ml

of ammonium chloride to the same amount of water solution and 1 ml of ammonia solution and 1 ml of ammonium oxalate We added the solution, shook it and left it for 10 minutes the solution did not become cloudy in this process either. It is known from this Our water for injection contains calcium burden.

8) 1 ml of ammonium chloride solution to 10 ml of water and 1 ml We added ammonium oxalate solutions and shook and 10 The solution should not be cloudy when we leave it for a minute was and did not blur because of this, if it was blurred it indicated the presence of sulfates, and this is our water njection water was not counted. And there is nother way to analyze it for this, 10 ml in a test tube with a diameter of 1.5 cm 1 ml of acetic acid after taking the water used for injection, When we add 2 drops of sodium sulfide solution and shake it then we left it for 1 minute and spread it along the axis of the test tube the color of the solution should not be observed when we look at it and that's it there was an incident, that is, the color of the solution was not known, that is the reason Our water for injection contains heavy metals if there was, the melt would be colored. We purified from these reactions and for injection We analyzed the water used for this injection We analyzed whether the used water meets the demand

Conclusion: As a result of these reactions, purified and the purity of the water used for injection we made sure.

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