**Counseling :**

**1- Indication :**

Exp 2.1 : gargles are aqueous solutions in concentrated form in our experiment , Potassium chlorate and Phenol gargle is used as a prophylactic or treats throat infections and as searched can be used in stomatitis and vaginitis as it is used a s a weak astringent in those cases and pharynx and nasopharynx . As this gargle Is generally used as a sailogogue , astringent and bactericide .

Exp 2.2 : Sodium Chloride mouth wash . Mouth washes , like Gargles are aqueous and concentrated but with deodorant , antiseptic , local analgesic or astringent characteristics . This mouth wash is to treat and prevent infections of the mouth and throat , and because the sodium chloride makes the environment hypertonic , it kills the bacteria and when you have mouth sore, bleeding gum, inflamed sore gum . Also used for oral hygiene and keeping the buccal cavity clean and fresh as well deodorize and it is an antiseptic .

Exp 2.3 : Dental Iodine Glycerin 10% is used for gingivitis and oral ulcers also has antiseptic and antifungal effects because of the iodine in it .

**2- Adminstration :**

Exp 2.1 : The gargle should be diluted with warm water before it is used and then used by making the gargle contact with the throat for a few seconds and then should be spit out , if the person swallows a bit of it ,it is okay but this gargle should not be swallowed in large quantities , as potassium chlorate if swallowed can cause acute toxicity . The gargle can be diluted as follows: 3 5ml spoonfuls should be added to about 150 ml of warm water . after dilution the gargle should be used , rinse the mouth for a about 20 secs once in morning and once in evening or more frequently if needed , any solution that stays not used from dilution should be discarded after . For about 10 minutes after using the gargle , refrain from eating or drinking .

Exp2.2 : The mouthwash should be diluted before using it , as about 20 ml of the mouthwash should be diluted with 20 ml of warm water( an equal volume of water ) . Use the mouthwash every 4 hours .

Exp2.3 : apply the dental iodine on infected area only using a dropper or cotton swab and if infection is too big the dental iodine can be used like a gargle for 20 secs .

**3- Adverse Effects :**

Exp 2.1 : if too much swallow can cause acute toxicity , other adverse effects include nausea , vomiting , flatulence , abdominal pain and diarrhea .

Exp2.2 : sometimes can cause slight burning on the nasal mucosa also can stain teeth and cause swelling of the mouth . Also can cause muscle hyper tonicity . Also should not be swallowed in large quantities as too much sodium bicarbonate can cause potassium deficiency .

Exp2.3 : allergic reactions ,and because it contains a small quantity of Glycerin, which can be harmful If swallowed in very big quantity ,can cause headache, stomach upset and diarrhea. also causes metallic taste .

**4- Storage :**

Exp2.1 : should be stored in a cool place and kept away from children in a well closed air tight container because it has a nice taste and smell they may drink it . and should be protected from light because potassium chlorate Is sensitive to light and should not be use after expiration and should be discarded .( Expiry : 2 weeks .)

Exp2.2 : should be stored in a cool place and away from children with tight sealed container and the conatainer should be amber as it is extemporaneously prepared .( Expiry : 1 month )

Exp2.3 : should be protected from the light in light resistant air tight containers and kept away from children .( Expiry : 1 month )

**Calculations :**

 In Exp2.3 , the manual used the ingrediet based to 1000 mL , but we used 100 mL during the experiment , so the ingredients quantities become like this :

Iodine was 100 g for 1000 mL . dividing by 10 should give us the result for 100 ml so:

100/10= 10 g iodine

Potassium iodide was 80 g for 1000 ml so for 100 ml :

80/140 = 8 g potassium iodide

Zinc sulfate was 10 g for 1000 ml so for 100 ml :

10 /10 = 1 g zinc sulfate

Glycerol was 350 ml for 1000 ml so for 100 ml :

350/10 = 35 ml glycerol

For Exp 2.2 there were some calculations in the manual as follows:

-Sodium bicarbonate is soluble 1 in 11 parts of water , so to dissolve 1 g of sodium bicarbonate a minimum of 1\*11 = 11 ml water should be required .

-Sodium chloride is soluble 1 in 3 parts of water . So to dissolve 1.5 g of sodium chloride , a minimum of 1.5\*3=4.5 ml water should be required .