**Potassium chromate, 5% w/v**

**Intended use**
Potassium Chromate, 5% w/v recommended for chloride estimation in urine sample.

**Composition**

**Ingredients**
- Potassium chromate: 5.0 gm
- Distilled water: 100.0 ml
- Final pH (at 25°C): 9.8±0.12

**Directions**
Place 10 drops of urine in a test tube and add 1 drop of 5% potassium chromate (K₂CrO₄) solution as indicator. Add dropwise 2.9% silver nitrate until a permanent and distinct colour change of red brown occurs.

**Principle And Interpretation**
Potassium chromate indicator method is a precipitation titration method that uses potassium chromate (K₂CrO₄) as indicator and silver nitrate (AgNO₃) as the standard solution. Add a small amount of K₂CrO₄ as indicator before starting determination, and then titrate with AgNO₃ standard solution. After the start of the titration, the precipitate of white (silver chloride) or pale yellow (silver bromide) precipitates first. When Cl- or Br- precipitates quantitatively, a little excess silver nitrate solution will cause the concentration of Ag⁺ suddenly increasing to immediately generate brick red silver chromate (Ag₂CrO₄) precipitation, indicating the titration endpoint. The chloride in the urine reacts with silver nitrate to precipitate as silver chloride. Any excess of silver nitrate reacts with potassium chromate to form a reddish precipitate of silver chromate, the appearance of which indicates the endpoint.

**Type of specimen**
Clinical samples: Urine

**Specimen Collection and Handling**
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**
In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

**Performance and Evaluation**
Performance of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

**Quality Control**

**Appearance**
Lemon yellow coloured solution.

**Clarity**
Clear with no insoluble particles.

**pH**
9.72-9.92

**Concentration**
4.90%-5.10%

Please refer disclaimer Overleaf.
Test
Place 10 drops of urine in a test tube and add 1 drop of 5% Potassium chromate (K₂CrO₄) solution as indicator. Add dropwise 2.9% silver nitrate with the same dropper until a permanent and distinct colour change to a red brown occurs.

Results
The number of drops of silver nitrate required to produce the colour change (red) expresses the sodium chloride content of the urine in grams per litre.

Storage and Shelf Life
Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference
2) McFadden J., 1980, Biochemical Tests for identification of Medical Bacteria, 2nd ed., CRC Publication, Cleveland, Ohio