

Beaumont

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Urine Color - Royal Oak

Document Type: Guideline

I. PURPOSE AND OBJECTIVE:

The yellow color of urine is due to presence of urochrome and small amounts of urobilins and uroerythrin (pink pigment). Below are two tables from Clinical Diagnosis and Management¹; these list the possible causes for different urine colors. It is important that the color be described in the urinalysis report.

II. APPEARANCE AND COLOR OF URINE:

Appearance	Cause	Remarks
Colorless	Very dilute urine	Polyuria, diabetes insipidus
Cloudy	Phosphates, carbonates Urates, uric acid Leukocytes Red cells ("smoky") Bacteria, yeasts Spermatozoa Prostatic fluid Mucin, mucous threads Calculi "gravel" Clumps, pus, tissue Fecal contamination Radiographic dye	Soluble in dilute acetic acid Dissolve at 60° and in alkali Insoluble in dilute acetic acid Lyse in dilute acetic acid Insoluble in dilute acetic acid Insoluble in dilute acetic acid May be flocculent Phosphates, oxalates Rectovesical fistula In acid urine
Milky	Many neutrophils (pyuria) Fat Lipiduria, opalescent Chyluria, milky Emulsified paraffin	Insoluble in dilute acetic acid Nephrosis, crush injury-solute in ether Lymphatic obstruction-soluble in ether Vaginal creams
Yellow	Acriflavin	Green fluorescence
Yellow-Orange	Concentrated urine Urobilin in excess Bilirubin	Dehydration, fever No yellow foam Yellow foam if sufficient bilirubin

Yellow-Green	Bilirubin-biliverdin	Yellow foam
Yellow-Brown	Bilirubin-biliverdin	"Beer" brown, yellow foam
Red	Hemoglobin Erythrocytes Myoglobin Porphyrin Fuscin aniline dye Beets Menstrual contamination	Positive Positive reagent strip for blood Positive May be colorless Foods, candy Yellow alkaline, genetic Clots, mucus
Red-Purple	Porphyrins	May be colorless
Red-Brown	Erythrocytes Hemoglobin on standing Methemoglobin Myoglobin Bilifuscin (dipyrrole)	Acid pH Muscle injury Result of unstable hemoglobin
Brown-Black	Methemoglobin Homogentisic acid Melanin	Blood, acid pH On standing, alkaline; alkaptonuria On standing, rare
Blue-Green	Idicans <i>Pseudomonas</i> infections Chlorophyll	Small intestine infections Moth deodorants

III. URINE COLOR CHANGES WITH COMMONLY USED DRUGS:

Drug	Color
Alcohol, ethyl	Pale diuresis
Anthraquinone laxatives (senna, cascara)	Reddish, alkaline: yellow-brown, acid
Chlorzoxazone (Paraflex) (muscle relaxant)	Red
Deferoxamine mesylate (Desferal) (chelates iron)	Red
Ethoxazene (Serenium) (urinary analgesic)	Orange, Red
Fluorescein sodium (given IV)	Yellow
Furazolidone (Furoxone) (Tricofuron) (an antibacterial, Antiprotozoal nitrofurantoin)	Brown
Indigo carmine dye (renal function, cystoscopy)	Blue
Iron sorbitol (Jectofer) (possibly other iron compounds forming iron sulfide in urine)	Brown on standing
Levodopa (L-dopa) (for parkinsonism)	Red then brown, alkaline
Mepacrine (Atabrine) (antimalarial) (intestinal worms, <i>Giardia</i>)	Yellow
Methocarbamol (Robaxin) (muscle relaxant)	Green-Brown
Methyldopa (Aldomet) (antihypertensive)	Darken if oxidizing agents present,

	red to brown
Methylene blue (used to delineate fistulas)	Blue, Blue-Green
Metronidazole (Flagyl) (for <i>Trichomonas</i> infection, amebiasis, <i>Giardia</i>)	Darkening, reddish brown
Nitrofurantoin (Furadantin) (antibacterial)	Brown-Yellow
Phenazopyridine (Pyridium) (urinary analgesic) also compounded with Sulfonamides (Azo Gantrisin, etc.)	Orange-Red, acid pH

IV. REFERENCES:

1. Henry, Clinical Diagnosis and Management by Laboratory Methods, 20th Ed., Philadelphia, W.B. Saunders Co., 2001, pp. 368-369.

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
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Applicability

Royal Oak