**Normal Characteristics of Urine**

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| **Yellow, clear color** | The color is due to a pigment (urobilinogen) which is a breakdown product from the heme groups of red blood cells. The first breakdown product (bilirubin) is first excreted with the bile, modified, and then reabsorbed in the intestines to be excreted in the urine. The color of urine will vary with urine volume, diet, and some disease states. If urine is allowed to stand, it will become cloudy. Bacterial contamination (indicative of a urinary tract infection) of the urine will also make freshly collected urine cloudy. |
| **Aromatic odor** | This odor becomes more “ammonia-like” if the urine is allowed to stand. The odor of urine can be affected by diet (i.e. asparagus) and by some disease states. |
| **pH** | The average pH is 6, but the pH can range from 4.5-8. This pH is affected by diet and by some disease states. If the kidneys are compensating for respiratory acidosis, the pH will be low. If the kidneys are compensating for respiratory alkalosis, the pH will be high. If an individual is taking excess amounts of vitamin C (ascorbic acid), the pH will be low. |
| **Specific gravity** | The specific gravity of urine ranges from 1.001 to 1.035. The specific gravity can be affected by diet, fluid intake, and some disease states. The more concentrated the urine is, the higher the specific gravity is. Specific gravity is a measure of the density of a liquid compared to the density of water. Water is defined as having a specific gravity of 1. |
| **“Waste” chemicals** | Urea, creatinine, uric acid, hippuric acid, indicant, ketone bodies, and other substances, depending on diet, are normal constituents of urine. Various inorganic salts are also normally present in urine, the most abundant of these is Na+ and Cl-. |