

Definition;

The Pauli exclusion principle states that no two identical fermions (particles with half-integer spin) can occupy the same quantum state at the same time. A more formal assertion is that the whole wave function for two identical fermions is anti-symmetric with regard to particle exchange. No two electrons in a single atom, for example, may have the same four quantum numbers; if n , l , and m_l are the same, m_s must be different such that the electrons have opposite spins.

8. Commercial nitric acid is colored due to the presence of dissolved:

- (1) Oxygen,
- (2) Nitrous oxide,
- (3) Nitrogen dioxide, and
- (4) colored impurities

Definition;

Because of the dissolved NO_2 , commercial nitric acid has a brown color. The process of bubbling dry air through warm commercial nitric acid removes the dissolved nitrogen dioxide, causing the acid to turn colorless.

9. Fertilizers with a high nitrogen content include: (1) urea,
- (2) ammonium sulfate,
 - (3) ammonium nitrate, and
 - (4) calcium citrate.

Definition;

A growth fertilizer will have a high nitrogen content but a low P and K content. Ammonium nitrate is the most nitrogen-rich fertilizer available, and it is quite effective. It is typically rated 33-0-0 or 34-0-0.

The bag includes around 33% or 34% Nitrogen and the remaining 66% or 67 percent inert stuff. Other growth fertilizer formulations will have 5, 6, or even 7 times more Nitrogen than anything else.