and urgency in adult men. Additionally tadalafil is used to improve the ability to exercise in people with pulmonary arterial hypertension (high blood pressure in the vessels carrying blood to the lungs, causing shortness of breath, dizziness, and tiredness) (Allen DS *et al*., 2004)

In particular tadalafil works to treat erectile dysfunction via increasing blood flow to the penis during sexual stimulation, with this intention it result in an erection. Not only but also Tadalafil treats pulmonary arterial hypertension by relaxing the blood vessels in the lungs to allow to more blood flow (Angulo J *et al*., 2001).

The recommended starting dose in erectile dysfunction is 10 mg as needed prior to sexual activity and 2.5 mg daily with no regard to sexual activity in case of benign prostatic hyperplasia. Overdose symptoms may include chest pain, nausea, irregular heartbeat, and feeling light-headed or fainting (Brock GB, *et al*., 2002).

Special precautions should be taken when used with nitrates as tadalafil may increase hypotenseve effects, angina, renal impairment, anti- hypertensives, hepatic impairment and alcohol (Eardley I, *et al.,* 2004).

1.4.2 Chemical and Physical Properties of Tadalafil

Tadalafil is metabolized by liver and it is 94% protein binding and has a half life 17.5 hours excreted through feces (>60%) and urine (>40 %). And it has the molecular formula $C_{22}H_{19}N_3O_4$ with a molar mass of 389.404 g/mol (Daugan, A., *et al*., 2003). Tadalafil chemical structure is shown in figure (4).