**log(Posterior Probability): −1410.69576889212**
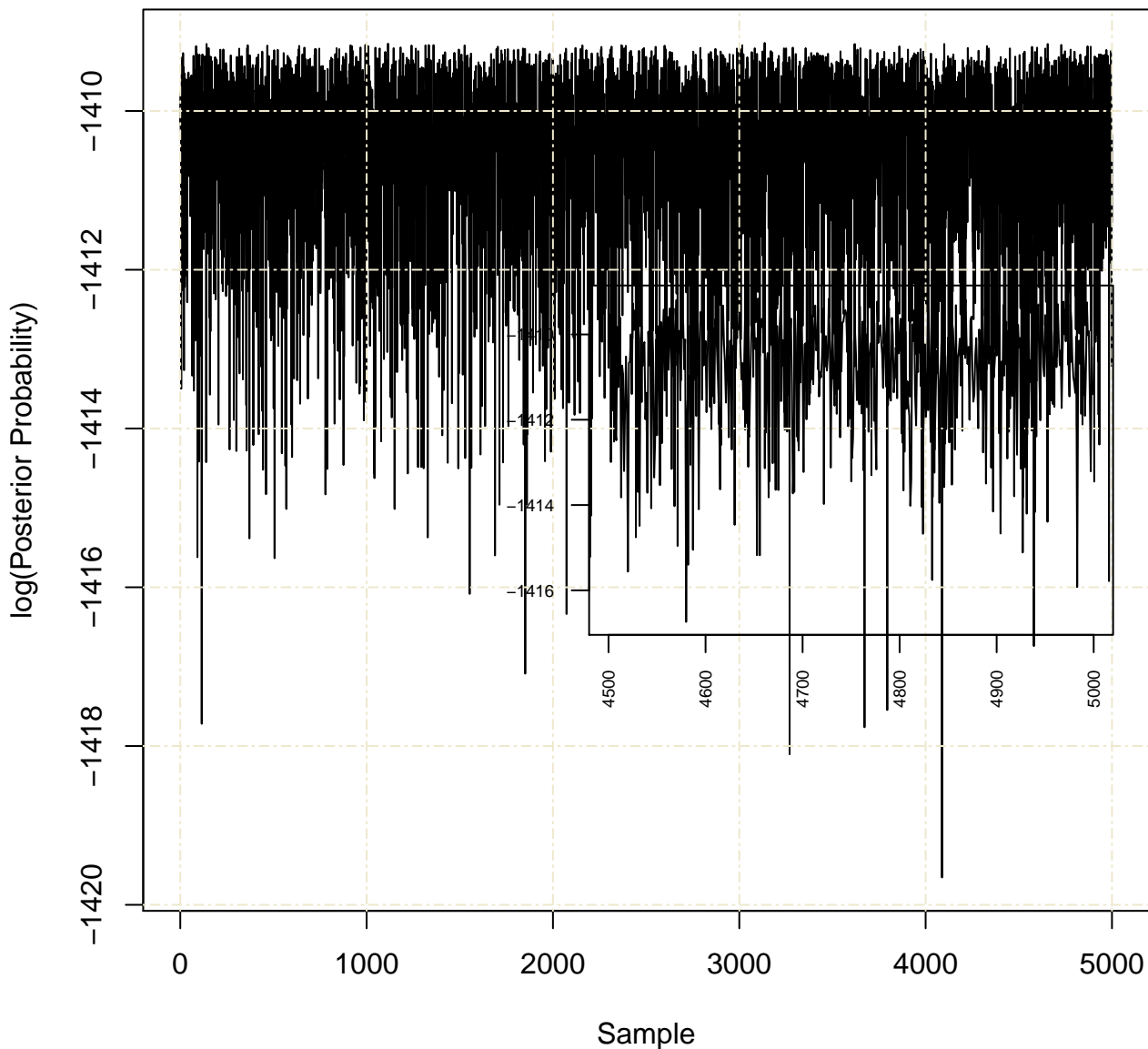
Trace of the Expected value of $\phi$