Anti-vitamin factors

Description
Anti-vitamin factors are a group of compounds having an anti-vitamin activity. They include (Tacon, 1997):
- Anti-vitamin A destroys carotene
- Anti-vitamin D interferes with calcium and phosphorus absorption
- Anti-vitamin E causes liver necrosis and muscular dystrophy
- Anti-thiamine factor (thiaminase) causes deficiencies in vitamin B\textsubscript{1}
- Anti-pyridoxine
- Anti-vitamin B\textsubscript{12}

Occurrences
Anti-vitamin factors are present in many plants used in fish feeds.

Treatment
They are heat-labile and are readily destroyed by heat treatment. Some of them can also be removed by water extraction (Tacon, 1997 – Francis et al., 2001).