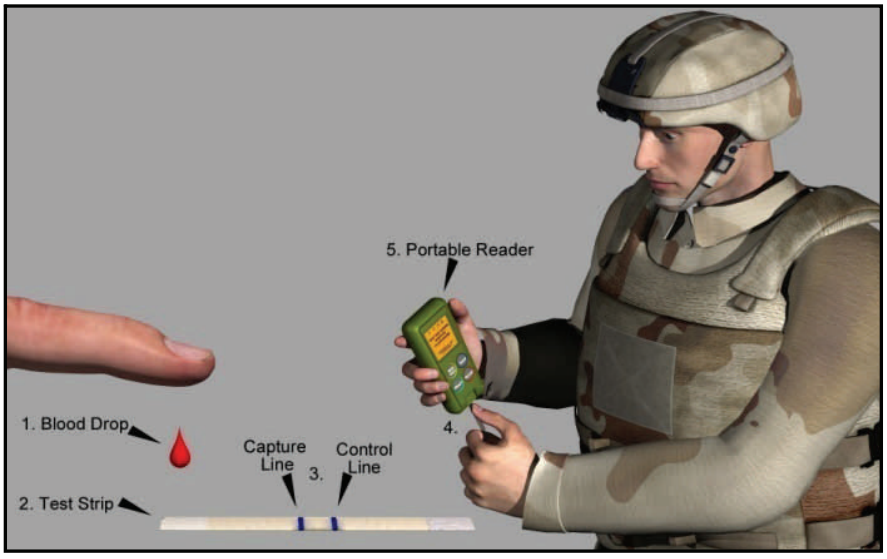
INTELLIGENT OPTICAL SYSTEMS, INC.

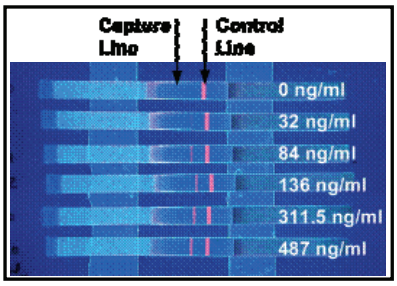
Traumatic Brain Injury Diagnostic Device



Conceptual overview of the Traumatic Brain Injury (TBI) diagnostic for field use being developed by IOS.

Prototype Reader

Test Strip & Cassette



Test Strips for TBI

The IOS traumatic brain injury (TBI) detection device is being developed to provide field medical personnel with a rapid, straight forward, and virtually noninvasive means of determining whether head trauma has resulted in potentially debilitating or life-threatening condition. From a single drop of blood on a test strip placed into a handheld reader, the IOS TBI Diagnosis technique can detect the body's own "signal chemicals" that are released when brain tissue is endangered.

Problem

- Traumatic brain injuries account for 25% of all war-related injuries and are a leading cause of mortality upon evacuation to a definitive care setting.
- TBI from closed head injuries is difficult to detect and can cause a broad range of physical, cognitive, emotional, and social problems for the injured veteran.

Payoff

- Safety/force protection.
- This tool will be extremely valuable for combat medics treating patients with suspected brain injuries.
- The early diagnosis could prevent complications from these injuries and allow for a faster prognosis and recovery.
- Virtually all First responders and front-line medical personnel are potential users, including, Army Combat Casualty Care, Air force and Navy or Emergency medical technicians and hospital emergency rooms.

CAPABILITIES

- Multiple biomarkers measured to improve diagnostic sensitivity and specificity
- Easy-to-use format for field applications and rapid results (~5 minutes)
- Results can be related to Glasgow Coma Scale and Glasgow Outcome Scale
- Based on lateral flow immunoassay technology and well-suited for commercial production
- Basic technology substantially equivalent to FDA approved diabetes test kits
- Clinical studies conducted so far provide very encouraging results

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