Claims

1. A test apparatus for checking container products (13) which are preferably composed of plastic materials and are produced using the blow-molding, filling and sealing methods, which are filled with fluid which, for production-related reasons, can contain particulate contamination which is deposited on the container wall when the container (13) is still and which appears floating freely in the fluid when the container (13) is moving and/or which changes its position as a result of the motion and in this way can be detected by means of a sensor device (37), and wherein by means of a vibration device (23), the respective container (13) can be oscillated at a pre-specifiable excitation frequency in such a way that the respective particulate contamination (47) in the fluid can be detected, characterized in that a handling device (3, 5, 7, 9) is provided, which takes the respective container (13) to be tested to a horizontal position in a station (31), in which the detector (37) is disposed below and the emitter (35) is disposed above the container (13), and which also takes it to a second station (33), in which the detector (37) is disposed above and the emitter (35) is disposed below the container (13).

2. The test apparatus according to Claim 1, characterized in that the vibration plane of the oscillating motion extends along the longitudinal direction, preferably along the midplane of the container (13).

3. The test apparatus according to Claim 1 or 2, characterized in that the container (13) is a component of a multiple container arrangement connected like cards (14).

4. The test apparatus according to one of the preceding claims, characterized in that the excitation frequency is selected such that, depending on the viscosity of the fluid contents of the container, larger air bubbles remain stationary in the fluid, and the particulate contamination (47) to be detected moves in the fluid.

5. The test apparatus according to one of the preceding claims, characterized in that the sensor device has at least one emitter (35), which emits rays such as visible light, infrared light, laser light or X-rays, which pass through at least the container wall and the fluid and which, after striking a detector (37) disposed on the opposite side, generate a measurement signal which can be

evaluated by means of an evaluation device.

6. The test apparatus according to one of the preceding claims, characterized in that, after the container (13) filled with fluid has been oscillated, a detector formed as a camera/recording device (37) takes several pictures of the particulate contamination (47), which is moving in the fluid, and in that the evaluation unit compares image sections captured once without particulate contamination (47) and once with particulate contamination (47).

7. The test apparatus according to one of the preceding claims, characterized in that, by means of the handling device (5, 7), the container (13) is held for a pre-specifiable rest period in a rest position until the fluid in the container (13) has settled.

8. The test apparatus according to one of the preceding claims, characterized in that, by means of the handling device (3, 5, 7, 9) and its handling aids (1) disposed in the manner of a carousel, container products (13) can be loaded onto and unloaded from the production line.

9. The test apparatus according to one of the preceding claims, characterized in that the evaluation unit uses computerized image processing methods such as grey value transformation, point operators and/or blending methods for the evaluation of the measurement signals.