Claims:

1. A method for simultaneously cutting a multiplicity of slices from a cylindrical workpiece having a diameter, by means a wire saw in the presence of a liquid cutting means, comprising a sawing wire, which has a wire grid composed of a multiplicity of wire portions disposed parallelwise between two rotatable wire guide rollers, the wire portions, having a longitudinal tension, describe a relative motion in relation to the workpiece as a result of rotation of the wire guide rollers with continual alternation between a first direction of rotation and a second direction of rotation, which is opposite to the first direction of rotation, the wire is moved by a first length during the rotation in the first direction, and by a second length during the rotation in the second direction, and the second length is less than the first, characterized in that, from the start of the cutting operation until the attainment of a first depth of cut, the supplied hard substances of the cutting means has a first mean particle diameter, and after attainment of the first depth of cut, until the end of the cutting operation, the supplied hard substances of the cutting means have a second mean particle diameter, and the first mean particle diameter is less than the second mean particle diameter.

2. The method as claimed in claim 1, wherein the first depth of cut is 2% of the greatest engagement length of a wire portion in the workpiece.

3. The method as claimed in claim 1, wherein the first depth of cut is 5% of the greatest engagement length of a wire portion in the workpiece.

4. The method as claimed in any one of claims 1 to 3, wherein the first particle diameter is between 50 and 80% of the second particle diameter.

5. The method as claimed in any one of claims 1 to 3, wherein the wire is a monofilament steel wire, having a first diameter, which has been provided, as a result of plastic deformation in the transverse direction of the wire, with a multiplicity of protuberances and indentations, in the form of a zigzag, the envelope curve of which, in the plane perpendicular to the longitudinal direction of the wire, has a second diameter, wherein the second diameter is greater than the first diameter.