

Stainless steel has always been considered suitable to food contact. Nevertheless, over the last fifty years the use of this type of alloys in the food industry, has suffered some limitations. Numerous experimental results have highlighted the tendency of stainless steel to release metallic ions (mainly nickel, chromium, manganese and iron) when in contact with food.

Currently the European Community has not a standard that regulates in the whole of Europe: (i) the selection criteria, (ii) the experimental procedure, (iii) the limits of metallic ions release, for stainless steels in contact with food.

Italy stands out positively in this panorama because It has adopted a decree law since 1973 (Decreto Ministeriale 21/03/73). The decree law makes a list of stainless steel alloys suitable for food contact and imposes to perform a test, called "release test", on all the articles that are placed on market. The articles can be placed on market only after passing the release tests.

However the presence on market of products that infringe the "D.M. 21/03/73", highlights some deficiencies in release tests. Therefore, It appears necessary the design of an experimental plan able to: (i) identify the factors that influence the release of metal ions from stainless steels in contact with food (ii), verify the test procedures specified by "D.M. 21/03/73".