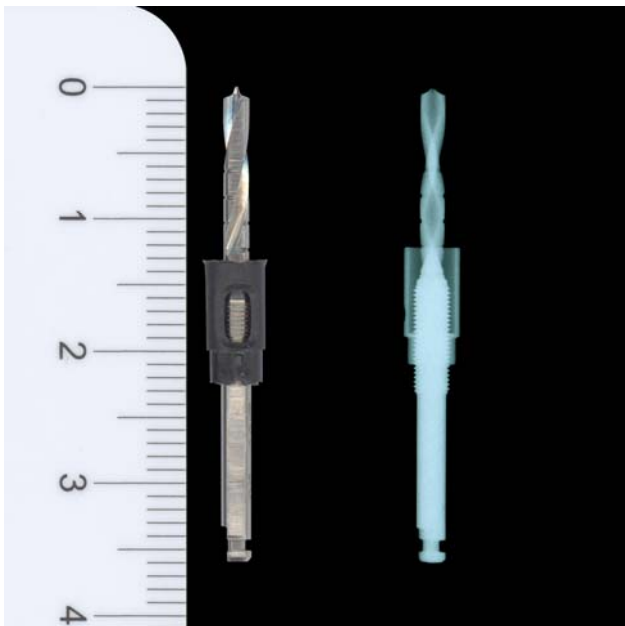


LATIGRAY: RADIOPAQUE COMPOUNDS

The growing attention to environmental and health problems makes treatment of waste and manipulation of heavy metals more and more complex. Among these substances lead stands out for both toxicity and diffusion.

However its physical features and the metal workability make it suitable to be used on a large-scale wherever efficient X and gamma shielding is needed, such as in medical sector applications, in the industrial X-ray and in the handling of radioactive sources.



In all these cases lead is fully used for the production of plates, isolation and protection containers providing safe working conditions to personnel exposed to dangerous beams.

However the problem is both in the lead transformation, in its manipulation and finally in the treatment of waste: all these operative phases are characterized by a significant impact on environment and human health.

Studying the shielding phenomenon it has been observed that other substances have similar features to those of lead.

LATI offers a range of Thermoplastic products suitable for injection moulding and providing an outstanding X-ray shielding effect. **LATIGRAY compounds** are produced by using fillers with an excellent radiation stopping power: **ceramics, metal oxides, mineral fillers, eco-efficient metals such as tungsten.**

LATI Radio-Opaque products are obtained by using PP, PA and the most advanced thermoplastic resins such as **PPS and PEEK**, in order to satisfy every design requirement even in terms of temperature and environmental compatibility.

Thanks to injection moulding technique, LATI is able to produce radio-shielding compounds to be used also with mould cavities featuring special geometries, respecting design requirements, minimizing manufacturing waste and consequently reducing direct and indirect costs. Moreover with LATIGRAY compounds it is possible to have a

technological advantage and a competitive progress of the manufactures.

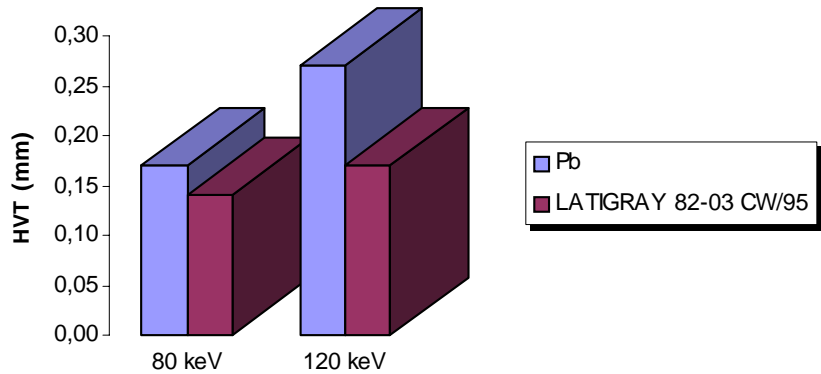
LATIGRAY shielding features can be optimized according to the requirements, selecting the typology and the quantity of radio-opaque filler added to the thermoplastic matrix.

LATI can thus produce X-rays opaque compounds filled with special mineral additives and ceramics as well as completely shielding grades as for steel or tungsten filled products.

LATIGRAY compounds filled with tungsten can guarantee shielding efficiencies very close to the one of lead, providing the same protection with similar wall thicknesses. Half Value Thickness data, indicating material thickness necessary to half the incoming beam, suggest tungsten filled LATIGRAY as even more efficient than lead.

LATI Radio-opaque Thermoplastics are used in medical X-ray devices, e.g. in the dental sector where it is possible to produce pins, bearers and other tools visible to fluoroscopy and X-ray photography thanks to the excellent

Half Value Thickness: Lead - LATIGRAY (HVT)



contrast with organic tissues.

Concerning X-ray photography, a LATI radio-opaque material has been used in the dental sector through the innovative **“Drilling Security System”** developed by ARSLINE; the drilling system allows the dentist to obtain a pre-adjusted height of screwing in order to avoid wrong odontology operations. New functional benefits are obtained with the substitution of a metallic part replaced by the LATIGRAY compound that offers its high performance radio-opaque characteristics.

Atoxic Radio-Opaque Compounds are characterized by easy transformation and immediate waste treatment: with LATIGRAY Compounds heavy metals substitution is now reality.