2 Materials and methods

S2.1 Data acquisition

An ATR/FT–IR spectrometer (Vertex 70v; Bruker Optik GmbH, Rosenheim, Germany) coupled with a Bruker A225/Q Platinum ATR unit (Bruker Optik GmbH, Rosenheim, Germany) with single reflection diamond crystal was used for cured meat ATR measurements.

S2.1.1 ATR/FT–IR instrument description and acquisition settings

ATR/FT–IR (absorbance) experiments were carried out with a resolution of 4 cm^{-1} (8 scans). Before scanning the samples, a background diamond crystal was recorded, and each sample spectrum was obtained by automatic subtraction of it. For each measurement, meat samples were carefully placed under the ATR press, as it is presented in Figure S1 below, maintaining the orientation they had in the pouches. Following every measurement the sample area and the tip of the A225/Q ATR unit were cleaned with pure ethanol (Et-OH; Sigma–Aldrich, Munich, Germany).

Figure S1: Sample preparation process for ATR measurement.

S3. Results and Discussion

S3.1 ATR Spectroscopic analysis

All the meat samples were measured by ATR/FT–IR spectroscopy in each measurement Day (0, 3, 9, 12, 15 and 28 days). LDPE peaks were not observed at meat signals, even the last big common peaks in 2800 cm^{-1} area did not have any increasing behavior. Probably the large spatial spot size and the mushy appearance of the sample did not benefit the detection of MPs. In Figure S2, ATR measurements are presented and compared with LDPE peaks, in each cured meat sample.

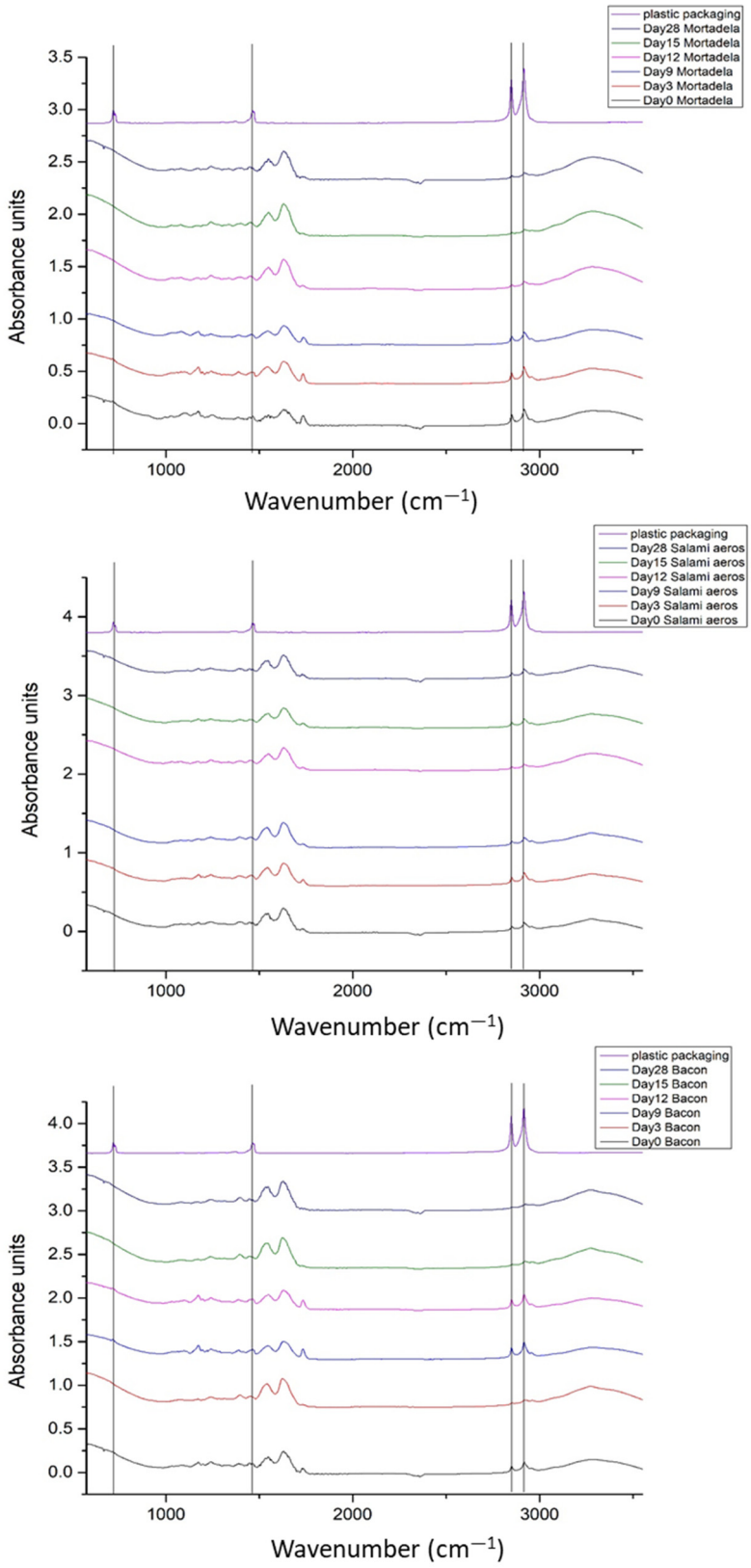

Figure S2: ATR measurements of meat samples compared to LDPE peaks. Spectra are normalized using "unit vector" and added in a stack line format for better comparison.