

## Sausage Operations askFSIS Questions

### Part 1 of 3: Use of Celery Powder and Other Natural Sources of Nitrite as Curing Agents, Antimicrobials or Flavorings

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Are celery powder and other natural sources of nitrite approved for use as curing agents, antimicrobials, or flavorings?

Celery powder and other natural sources of nitrite are approved for use as antimicrobials and flavorings. Neither celery powder (whether in a form containing pre-converted nitrite or when used with a nitrate-reducing bacterial culture) nor other natural sources of nitrite are approved for use in [9 CFR 424.21\(c\)](#) as curing agents. As with natural sources of nitrite, natural sources of ascorbate such as cherry powder are approved for use as antimicrobials but not approved as cure accelerators. Ingredients approved for use as curing agents and cure accelerators are listed in [9 CFR 424.21\(c\)](#).

Celery powder and other natural sources of nitrite are considered safe and suitable as antimicrobials according to [FSIS Directive 7120.1, Safe and Suitable Ingredients Used in the Production of Meat and Poultry Products](#) and [9 CFR 424.21\(c\)](#) if used in combination with a natural source of ascorbate such as cherry powder. Celery powder can be added to meat and poultry products as a flavoring in accordance with [317.2\(f\)\(1\)\(i\)\(B\)](#) and [381.118\(c\)\(2\)](#) along with other natural sources of nitrite such as beet juice and sea salt. Because celery powder and other natural sources of nitrite are not currently approved for use in [9 CFR 424.21\(c\)](#) as curing agents, products that are required to contain curing agents and cure accelerators as part of a standard of identity in 9 CFR 319 or 9 CFR 317.17(b) but instead are formulated with natural sources of nitrite and ascorbate (e.g., hot dogs and corned beef that contain celery powder instead of sodium or potassium nitrite and cherry powder instead of ascorbate) must be labeled as "uncured" under [9 CFR 319.2](#). In addition, the label must also contain the statement "no nitrates or nitrites added" per [9 CFR 317.17](#) that is qualified by the statement "except for those naturally occurring in [name of natural source of nitrite such as celery powder]" in order to not be considered to be misbranded due to false and misleading

labeling under [9 CFR 317.8](#). It would not be appropriate to label products with natural sources of nitrite with other terms such as "naturally cured" or "alternatively cured".

**NOTE:** Products formulated with natural sources of nitrate and ascorbate which contain an amount of salt sufficient to achieve a brine concentration of 10 percent or more are exempted from the "Uncured" and accompanying "no nitrates or nitrites added" statement and qualifier labeling requirement as per 9 CFR 317.17(c)(3).

For more information on using these ingredients as antimicrobials see the askFSIS Answer, [Part 2 of 3: Revised Appendix B: Stabilization Option 3 for products containing celery powder and other natural sources of nitrite](#)

## Rework in 319.180, "Cooked Sausage" products

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Is cooked meat rework allowed in a 319.180 "Cooked Sausage" product?

Yes. Rework consists of any fully or partially processed product rerouted for reasons other than unwholesomeness or adulteration in which the cause for adulteration cannot be reconditioned and eliminated. Rework is typically intended for inclusion in cooked sausages, loaves, and similar products including sausage with a standard of identity in 9 CFR 319.180. Care must be taken to ensure that the ingredient list, including order of predominance, and the nutrition facts panel information remain accurate with the inclusion of rework.