

Figure: 25 TAC §221.14(c)(10)(B)(i)

Time-Temperature Combinations for Meat Products to Achieve Lethality

Temperatures stated are the minimum internal temperatures that must be met in all parts of the meat product for the total dwell time listed to achieve a 7-log reduction. An establishment must ensure both time and temperature parameters are met. Meat Safety Assurance recommends limiting the total time product temperature is between 50 and 130°F to 6 hours or less.

<u>Degrees Fahrenheit</u>	<u>Dwell Time</u>
<u>130</u>	<u>121 minutes</u>
<u>131</u>	<u>97 minutes</u>
<u>132</u>	<u>77 minutes</u>
<u>133</u>	<u>62 minutes</u>
<u>134</u>	<u>47 minutes</u>
<u>135</u>	<u>37 minutes</u>
<u>136</u>	<u>32 minutes</u>
<u>137</u>	<u>24 minutes</u>
<u>138</u>	<u>19 minutes</u>
<u>139</u>	<u>15 minutes</u>
<u>140</u>	<u>12 minutes</u>
<u>141</u>	<u>10 minutes</u>
<u>142</u>	<u>8 minutes</u>
<u>143</u>	<u>6 minutes</u>
<u>144</u>	<u>5 minutes</u>
<u>145</u>	<u>4 minutes</u>
<u>146</u>	<u>182 seconds</u>
<u>147</u>	<u>144 seconds</u>
<u>148</u>	<u>115 seconds</u>
<u>149</u>	<u>91 seconds</u>
<u>150</u>	<u>72 seconds</u>
<u>151</u>	<u>58 seconds</u>
<u>152</u>	<u>46 seconds</u>
<u>153</u>	<u>37 seconds</u>
<u>154</u>	<u>29 seconds</u>
<u>155</u>	<u>23 seconds</u>
<u>156</u>	<u>19 seconds</u>
<u>157</u>	<u>15 seconds</u>
<u>158</u>	<u>0 seconds</u>
<u>159</u>	<u>0 seconds</u>
<u>160</u>	<u>0 seconds</u>

Figure: 25 TAC §221.14(b)(11)(B)(i)

Internal Temperature	Time
157° F and up	10 seconds
156° F	13 seconds
155° F	16 seconds
154° F	20 seconds
153° F	26 seconds
152° F	32 seconds
151° F	41 seconds
150° F	1 minute
145° F	4 minutes
144° F	5 minutes
143° F	6 minutes
142° F	8 minutes
141° F	10 minutes
140° F	12 minutes
139° F	15 minutes
138° F	19 minutes
137° F	24 minutes
136° F	32 minutes
135° F	37 minutes

134 °F	47 minutes
133 °F	62 minutes
132 °F	77 minutes
131 °F	97 minutes
130 °F	121 minutes