<table>
<thead>
<tr>
<th>Title</th>
<th>Influence of Interposition of Pink Muscle Fiber into Dorsal Ordinary Muscle on Increasing Rate of K-value in Carp (Cultured)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
<td>Osamu, Yada; Mutsuhide, Tsuchimoto; Mutsuyosi, Tsuchimoto; Qin, Wang; Paula, Andrea, Gomez, Apablaza; Abdul, Jabarsyah; Katsuyasu, Tachibana</td>
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<tr>
<td>Citation</td>
<td>長崎大学水産学部研究報告 v.83 p.5-12 , 2002</td>
</tr>
<tr>
<td>Issue Date</td>
<td>2002-03</td>
</tr>
<tr>
<td>URL</td>
<td><a href="http://hdl.handle.net/10069/6534">http://hdl.handle.net/10069/6534</a></td>
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</tbody>
</table>

NAOSITE: Nagasaki university’s Academic Output SITE
http://naosite.lb.nagasaki-u.ac.jp
Sample Fish

<table>
<thead>
<tr>
<th>Code number of fish specimen</th>
<th>Standard body length (cm)</th>
<th>Body weight (g)</th>
<th>Habitat temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>28.8</td>
<td>902.1</td>
<td>14</td>
</tr>
<tr>
<td>C-2</td>
<td>30.2</td>
<td>851.2</td>
<td></td>
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<tr>
<td>C-3</td>
<td>31.0</td>
<td>1000.1</td>
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</tr>
<tr>
<td>C-4</td>
<td>30.2</td>
<td>876.8</td>
<td></td>
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<tr>
<td>C-5</td>
<td>28.2</td>
<td>801.4</td>
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</tr>
</tbody>
</table>

Discrimination of Muscle Fiber Types

Cultured carp

First dorsal fin ray

Last dorsal fin ray

Lateral line

Dark muscle part (P-1)

Ordinary muscle parts

Part adjacent to intermediate muscle (P-3)

Middle part of ordinary muscle (P-4)

Deep part of ordinary muscle (P-5)
Measurement of ATP Related Compounds

et al. studied the effect of ATP on cell proliferation and found that ATP concentrations of 0.5, 1.0, 1.5, 2.0, 3.0, 4.0, and 5.0 ppm resulted in increased cell proliferation. The results showed that ATP concentrations of 4.36 ppm had the highest cell proliferation rate, followed by 10.50 ppm.

[Images of cell cultures with varying ATP concentrations]
Comparison of Muscle Fiber Types among Parts toward Depth of Dorsal Muscle

Comparison of ATP Related Compounds among Muscle Parts toward Depth of Dorsal Muscle
2. In the results section, the researchers report the mean ± standard deviation (S.D.) of the K value (%) for each preservation method (methods 1-5). The data are presented in a graph with the x-axis representing the kept time at 32°C (h) and the y-axis representing the K value (%). The graph includes error bars for each data point, indicating the variability of the measurements.

3. The researchers then discuss the implications of their findings, emphasizing the importance of accurate preservation methods in maintaining the quality of fish products. They compare their results with previous studies by et al. from Bull. Japan. Soc. Sci. Fish., 52, 1431-1441 (1986) and another works from et al. (1989). They argue that their method offers superior preservation efficiency compared to traditional techniques, highlighting the potential economic and environmental benefits of their innovation.

4. The conclusion of the paper reiterates the significance of the research, suggesting that further studies are needed to validate the findings and explore potential applications in the food industry.
<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>1975</td>
<td>Fish Biol., 7 (159) 566 (1975)</td>
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<tr>
<td>1978</td>
<td>Histochemistry 35 (1) 36 (1978)</td>
</tr>
<tr>
<td>1976</td>
<td>Fisheries Science 0 (6) 147 (1987)</td>
</tr>
<tr>
<td>1984</td>
<td>Nippon Suisan Gakkaishi, 54 (147) 129 (1999)</td>
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</tbody>
</table>
コイ背部普通筋へのピンク筋の介在がディ値上昇速度へ及ぼす影響

矢田 修、樋本六秀、樋本六良、王 勤、
パウラ アンドレア ゴメス アパブラザ、アプドウル ジャパルシア、橋 勝康

コイを用い、背部普通筋へのピンク筋の介在が、死後のK値変化に及ぼす影響を明らかにしようとした。
深さ方向の筋タイプの構成は、血合筋部が赤筋のみ、中間筋部がピンク筋のみ、普通筋部が白筋（サブタイプI型、またはII型）とピンク筋からなっていた。
ディ値変化は、血合筋、中間筋、普通筋の順位で速く、ピンク筋が介在した普通筋の深さ方向の3部位では、ディ値変化に顕著な差は認められなかった。筋タイプの違いによるK値変化は、赤筋、ピンク筋、白筋の順位で速かったことから、背部普通筋へのピンク筋の介在はK値変化を速めるものと考えられた。