

Compost Humification

Evaluation Method of Compost Humification

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Abstract :

An efficient quantitative evaluation index of various composts is not yet established, so that estimation of compost humification has been based on traditional farm compost and has mainly used "experiential theory" for a long time. The purpose of this study is to develop the applying productive and quality managements in the composting production system from organic wastes. Water soluble and ultraviolet absorbed component of compost was separated as molecular weight by the gel permeation chromatograph, and the results have revealed a correlation between the molecular weight 1500 under the component volume and humifying level of compost. By using this system, the compost evaluation has become possible and the utilizing techniques have

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Synopsis :

An efficient quantitative evaluation index of various composts is not yet established, so that estimation of compost humification has been based on traditional farm compost and has mainly used "experiential theory" for a long time. The purpose of this study is to develop the applying productive and quality managements in the composting production system from organic wastes. Water soluble and ultraviolet absorbed component of compost was separated as molecular weight by the gel permeation chromatograph, and the results have revealed a correlation between the molecular weight 1500 under the component volume and humifying level of compost. By using this system, the compost evaluation has become possible and the utilizing techniques have

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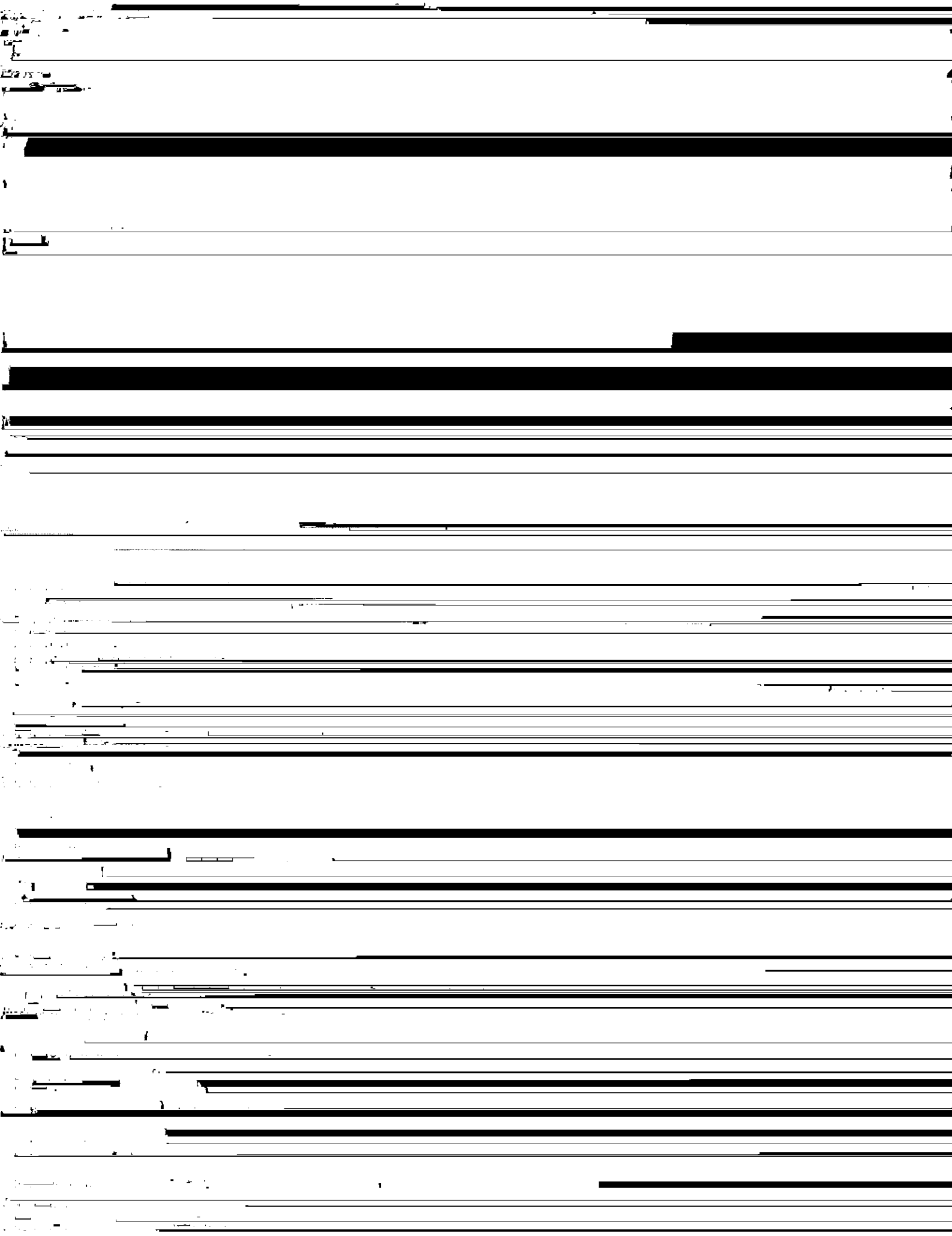
要旨

コンポストの熟成度を評価する方法として、有機物の分解率、窒素含有率、pH、腐植酸含有率、および腐植酸の芳香性などを指標として、

Table 1 Change of organic component in composting of town waste

(dry matter %)

				Hot water	Reducing sugar	
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Compost 100 g

Mixture/  
Homogenize

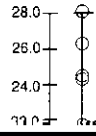


Table 7 Relationship between composting period and C content. (The relationship between composting period and C content is shown in Figure 7.)

Composting period (week)	C content (%)
0	42.5
1	41.5
2	40.5
3	39.5
4	38.5
5	37.5
6	36.5
7	35.5
8	34.5
9	33.5
10	32.5
11	31.5
12	30.5
13	29.5
14	28.5
15	27.5
16	26.5
17	25.5
18	24.5
19	23.5
20	22.5
21	21.5
22	20.5
23	19.5
24	18.5
25	17.5
26	16.5
27	15.5
28	14.5
29	13.5
30	12.5
31	11.5
32	10.5
33	9.5
34	8.5
35	7.5
36	6.5
37	5.5
38	4.5
39	3.5
40	2.5

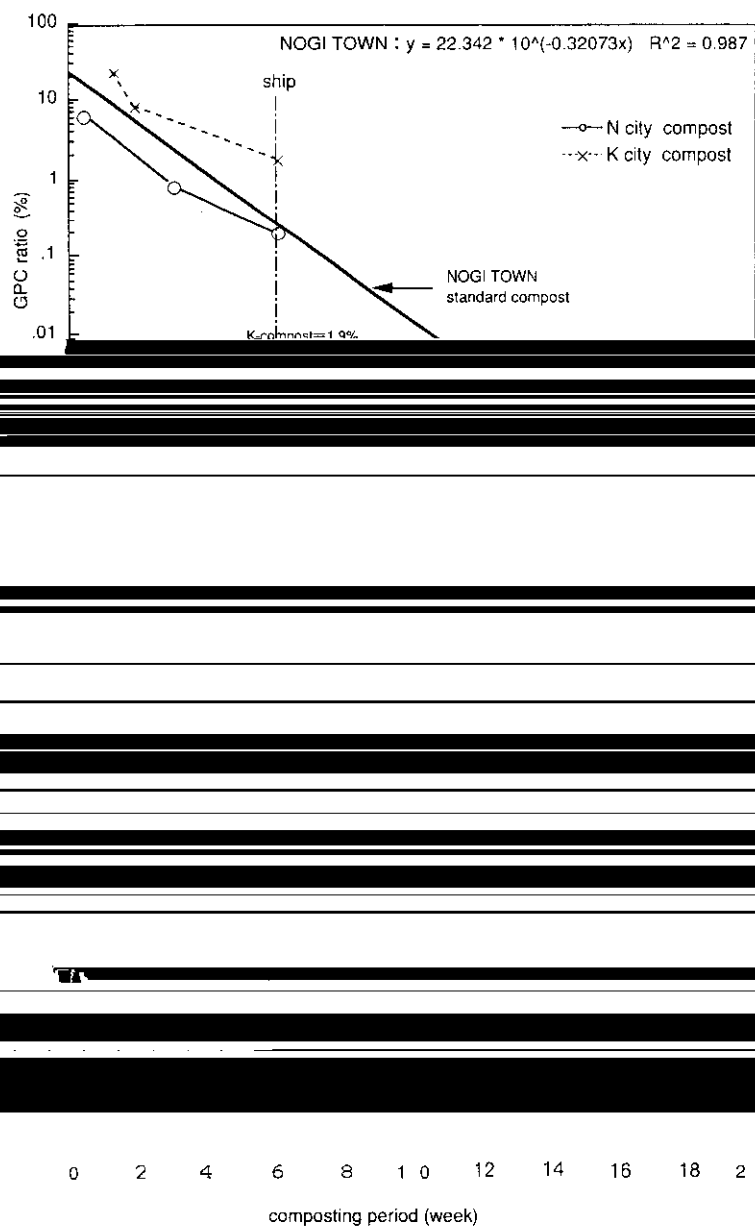


Fig. 9 Composting progress and GPC ratio (commercial plants)